ORDER NO. SD83072625C7

Service Manual

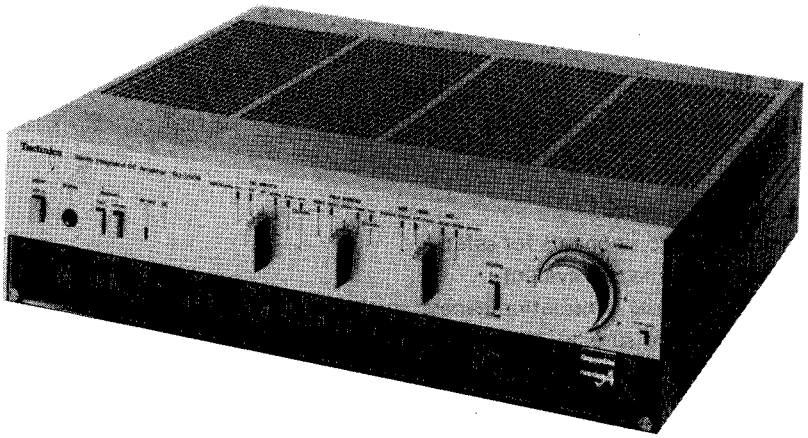
Stereo Integrated DC Amplifier

SU-V909

[XA],[PA],[PE], [PC]

SU-V909(K)

[PC]



* The colors of this model include silver and black.
* The black type model is provided with (K) in the Service Manual.

Areas

* [XA] is available in Southeast Asia, Oceania, Africa, Middle Near East and Central South America.
* [PA] is available in Far East PX.
* [PE] is available in European Military.
* [PC] is available in European Audio Club.

Specifications (DIN 45 500)

(Specifications are subject to change without notice for further improvement.)

■ AMPLIFIER SECTION

Rated minimum sine wave RMS power output
20 Hz~20 kHz both channels driven
0.003% total harmonic distortion
120W per channel (8 ohms)
20 Hz~20 kHz both channels driven
0.007% total harmonic distortion
120W per channel (4 ohms)

1 kHz continuous power output	
both channels driven	
0.003% total harmonic distortion	120W per channel (8 ohms)
0.003% total harmonic distortion	120W per channel (4 ohms)
Dynamic headroom	0 dB (8 ohms)
	0 dB (4 ohms)
Total harmonic distortion	
rated power at 20 Hz~20 kHz	0.003% (8 ohms)
half power at 20 Hz~20 kHz	0.003% (8 ohms)
half power at 1 kHz	0.0007% (8 ohms)
SMPTE intermodulation distortion	0.003% (8 ohms)
Frequency response	
PHONO	RIAA standard curve ±0.2 dB
TUNER, AUX/CD/VIDEO, TAPE	20 Hz~20 kHz, +0 dB, −0.2 dB
Input sensitivity	
PHONO MM	0.1 mV (1 mV, IHF '66)
	0.25 mV (2.5 mV, IHF '66)
MC	10 μV (100 μV, IHF '66)
	25 μV (250 μV, IHF '66)
TUNER, AUX/CD/VIDEO, TAPE	15 mV (150 mV, IHF '66)
S/N (IHF, A)	
PHONO MM (2.5 mV)	75 dB (88 dB, IHF '66)
MC (250 μV)	74 dB (71 dB, IHF '66)
TUNER, AUX/CD/VIDEO, TAPE	79 dB (103 dB, IHF '66)
Maximum input voltage	
PHONO MM (2.5 mV)	150 mV (170 mV, 1 kHz)
MC (250 μV)	15 mV (17 mV, 1 kHz)
Input impedance	
PHONO MM	47 kilohms
MC	100/220 ohms
TUNER, AUX/CD/VIDEO, TAPE	33 kilohms
Tone controls	
BASS	50 Hz, +7 dB~ −7 dB
TREBLE	20 kHz, +10 dB~ −10 dB
Turnover frequency	75 Hz/150 Hz
SUPER BASS (12 dB/oct.)	20 Hz, 0 dB~ +10 dB
Subsonic filter	20 Hz, −12 dB/oct.
High filter	7 kHz, −6 dB/oct.
Loudness control (volume at −30 dB)	50 Hz, +7 dB
Muting	−20 dB
Output voltage	
TAPE 1, 2 REC OUT	150 mV
Low frequency damping factor	60 (8 ohms)
	30 (4 ohms)
Load impedance	
MAIN or REMOTE	4~16 ohms
MAIN and REMOTE	8~16 ohms

■ GENERAL

Power consumption	870W
Power supply	AC 50/60 Hz 110V/120V/220V/240V
Dimensions (W×H×D)	430 × 120 × 350 mm
	(16-15/16" × 4-23/32" × 13-25/32")
Weight	14.9 kg
	(32.8 lb.)

Note:
Total harmonic distortion is measured by the digital spectrum analyzer (H.P. 3045 system).

Technics

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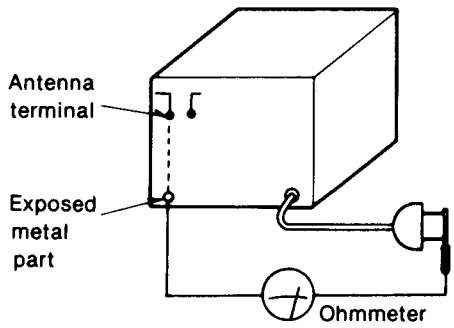
■ SAFETY PRECAUTION

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacturer's recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

• INSULATION RESISTANCE TEST

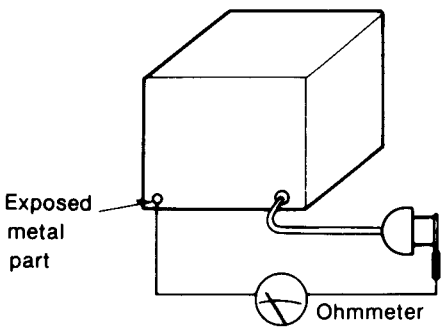
1. Unplug the power cord and short the two prongs of the plug with a jumper wire.
2. Turn on the power switch.
3. Measure the resistance value with ohmmeter between the jumpered AC plug and each exposed metal cabinet part, such as screwheads antenna, control shafts, handle brackets, etc. Equipment with antenna terminals should read between 3MΩ and 5.2MΩ to all exposed parts. (Fig. A) Equipment without antenna terminals should read approximately infinity to all exposed parts. (Fig. B)

Note: Some exposed parts may be isolated from the chassis by design. These will read infinity.



(Fig. A)

Resistance = 3MΩ—5.2MΩ



(Fig. B)

Resistance = Approx ∞

4. If the measurement is outside the specified limits, there is a possibility of a shock hazard. The equipment should be repaired and rechecked before it is returned to the customer.

ORDER NO. SD83072625C7–A

Stereo Integrated DC Amplifier SU-V909/SU-V909(K)

- Este librito incluye las especificaciones y adjuste de Modelo SU-V909 (Pedido Nº. SD83072625C7) escritas en español.
- Guardar este librito juntamente con el manual de servicio de Modelo SU-V909.

ESPAÑOL

■ ESPECIFICACIONES (Estas especificaciones están sujetas a cualquier cambio sin previo eviso.)

(IHF '78)

■ SECCION DEL AMPLIFICADOR

Salida de potencia de régimen eficaz por onda sinusoidal mínima
- **20 Hz~20 kHz en ambos canales**
  0,003% Distorsión armónica total 120W o canal (8Ω)
- **20 Hz~20 kHz en ambos canales**
  0,007% Distorsión armónica total 120W o canal (4Ω)

Potencia continua de 1 kHz
- **en ambos canales**
  Distorsión armónica total 0,003% 120W o canal (8Ω)
  Distorsión armónica total 0,003% 120W o canal (4Ω)

Espacio libre dinámico 0 dB (8Ω)
0 dB (4Ω)

Distorsión armónica total
- **potencia de régimen a 20 Hz~20 kHz** 0,003% (8Ω)
- **mitad de potencia a 20 Hz~20 kHz** 0,003% (8Ω)
- **mitad de potencia a 1 kHz** 0,0007% (8Ω)

Distorsión por intermodulación según SMPTE 0,003% (8Ω)

Respuesta de frecuencia
- **TOCADISC. (PHONO)** curva RIAA estándar ±0,2 dB
- **SINTON., AUX./CD/VIDEO, GRAB. (TUNER, AUX/CD/VIDEO, TAPE)** 20 Hz~20 kHz, +0 dB, −0,2 dB

Sensibilidad de entrada
- **TOCADISC. I. M. (PHONO MM)** 0,1 mV (1 mV, IHF '66) 0,25 mV (2,5 mV, IHF '66)
- **TOCADISC. B. M. (PHONO MC)** 10 μV (100 μV, IHF '66) 25 μV (250 μV, IHF '66)
- **SINTON., AUX./CD/VIDEO, GRAB. (TUNER, AUX/CD/VIDEO, TAPE)** 15 mV (150 mV, IHF '66)

Relación de señal a ruido (IHF, A)
- **TOCADISC. I. M. (PHONO MM) (2,5 mV)** 75 dB (88 dB, IHF '66)
- **TOCADISC. B. M. (PHONO MC) (250 μV)** 74 dB (71 dB, IHF '66)
- **SINTON., AUX./CD/VIDEO, GRAB. (TUNER, AUX/CD/VIDEO, TAPE)** 79 dB (103 dB, IHF '66)

Voltaje máximo de entrada
- **TOCADISC. I. M. (PHONO MM) (2,5 mV)** 150 mV (170 mV, 1 kHz)
- **TOCADISC. B. M. (PHONO MC) (250 μV)** 15 mV (17 mV, 1 kHz)

Impedancia de entrada
- **TOCADISC. I. M. (PHONO MM)** 47 kΩ
- **TOCADISC. B. M. (PHONO MC)** 100/220Ω
- **SINTON., AUX./CD/VIDEO, GRAB. (TUNER, AUX/CD/VIDEO, TAPE)** 33 kΩ

Controles de tono
- **BAJOS (BASS)** 50 Hz, +7 dB~ −7 dB
- **AGUDOS (TREBLE)** 20 kHz, +10 dB −10 dB

Frecuencia de Tránsito 75 Hz/150 Hz
- **SUPERBAJOS (12 dB/oct)** 20 Hz, 0 dB~ +10 dB

Filtro subsónico 20 Hz, −12 dB/oct.
Filtro de corte de altos 7 kHz, −6 dB/oct.
Control de sonoridad (volumen a −30 dB) 50 Hz, +7 dB
Silenciamiento −20 dB
Voltaje de salida
- **GRAB. 1, 2 SAL. GRAB. (TAPE 1, 2 REC OUT)** 150 mV

Factor de amortiguamiento 30 (4Ω), 60 (8Ω)
Impedancia de carga
- **MAIN o REMOTE** 4Ω~16Ω
- **MAIN y REMOTE** 8Ω~16Ω

■ GENERAL

Consumo de energía 870 W
Alimentación de energía CA 50 Hz/60 Hz, 110V/120V/220V/240V
Dimensiones (An.×Al.=Prof.) 430 × 120 × 350 mm
Peso 14,9 kg

Nota:
La distorsión armónica total se mide con el analizador de espectro digital (sistema H.P. 3045).

■ MEDICIONES Y AJUSTES

- **Puesta de controles e instrumentos a usarse**

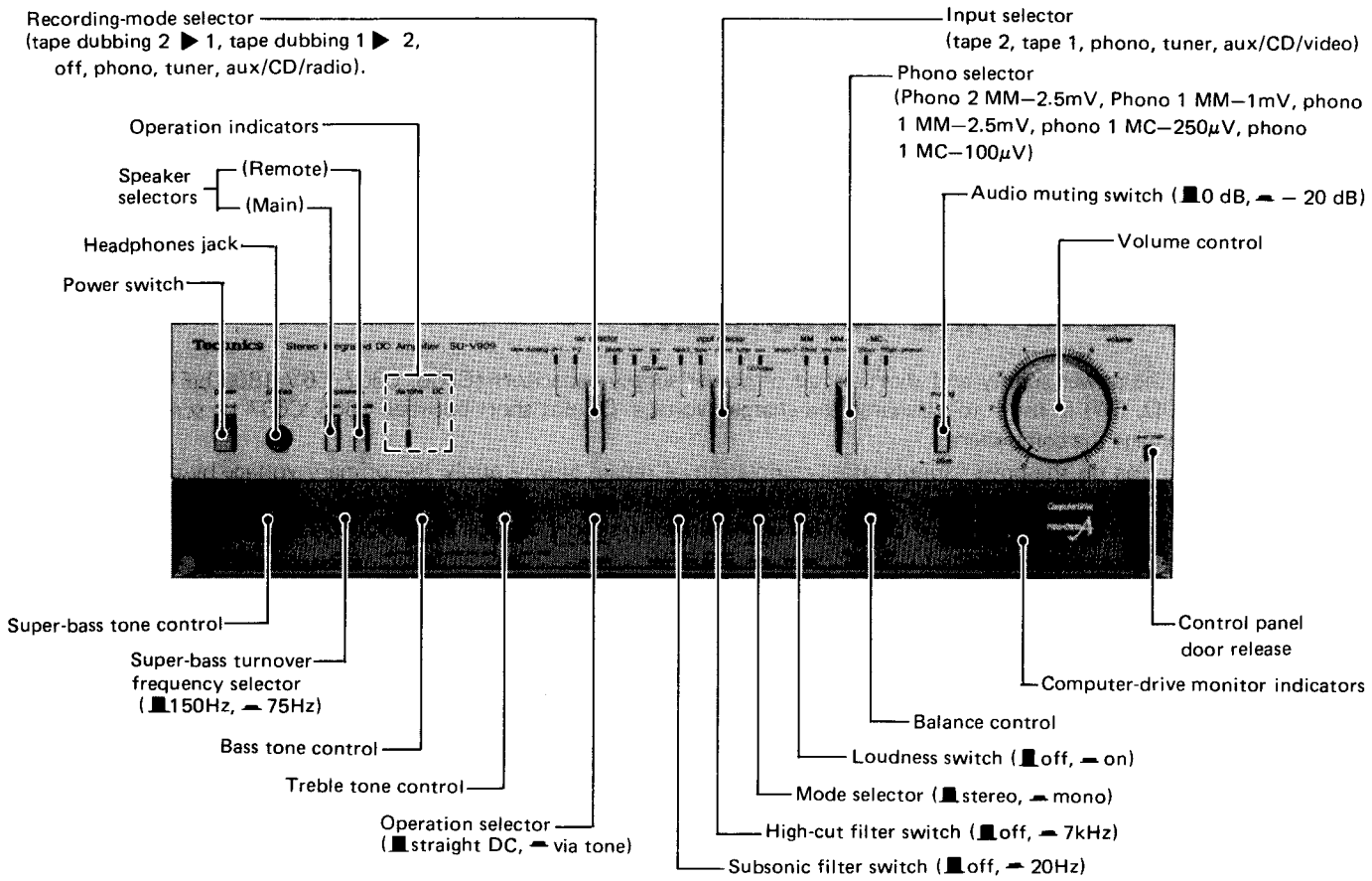
1. Antes del ajuste, VR301, VR302 y VR601 deberán girarse hacia la izquierda; VR701, VR702 y VR901 deberán girarse hacia la posición del centro.
2. Volumen de sonido . . . O (mínimo)
3. Interruptor del altavoz principal . . . conectado (on)
4. Interruptor del altavoz remoto . . . desconectado (off)
5. Selector de operación . . . C.C. directa
6. Voltímetro de C.C. (capaz de medir 5mV)
7. Osciloscopio

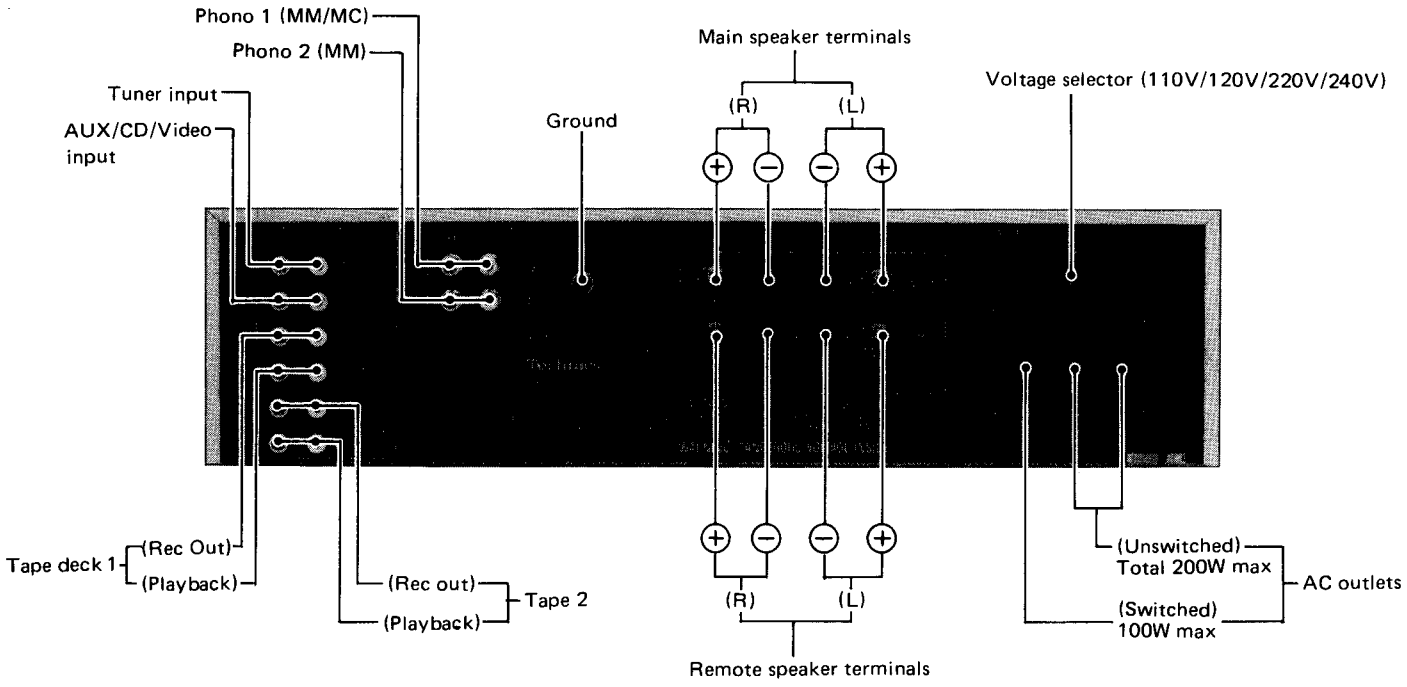
Nº.	Ajustes	Conexión del voltímetro de C.C. o del osciloscopio	VR ajustada	Procedimiento de ajuste
1	Ajuste del circuito de detección de impedancia de carga (después de haber reparado el circuito de detección de impedancia del altavoz) (Fig. 19)	* Conectar la carga con 3,3Ω y 3,3Ω (1/2W, ±5%) al terminal del altavoz marcado "main" (Tanto el canal der. (R) como el izq. (L)). * Conectar un voltímetro de C.C. entre TP701 y el chasis (canal izq. (L)). * Conectar un voltimetro de C.C. entre TP702 y el chasis (canal der . (R)). * Conectar TP703 y el chasis.	VR701 (Canal izq.(L)) VR702 (Canal der (R))	1. Girar VR701 totalmente hacia la derecha. 2. Regular VR702 de manera tal que el voltaje de TP702 resulte +0,18V ~ −0,2V. 3. Regular VR701 de manera tal que el voltaje de TP701 resulte +0,18V ~ −0,2V.
2	Ajuste y revisión del voltaje de alimentaclon (después de haber reparado el circuito de alimentacion de corriente,) (Fig. 20)	* Conectar el voltímetro a Q327 (colector) y a TP502 . * Poner el selector del altavoz en "main" al medir el voltaje. * De estar encendida la alimentacicón de corriente del equipo, cambiando la impedancia de carga no se producirá alteración del voltaje de alimentación. Por lo tanto, apagar la alimentación de corriente o cambiar el selector del altavoz a otra posición. * Con el selector de altavoz puesto en "main" y "remote", el voltaje indicado será de 4~6Ω.	VR601	1. Conectar una carga de 8Ω al terminal del altavoz marcado "main". 2. Regular VR601 de manera tal que el voltaje resulte +54,5V. 3. La resistencia de carga enviada al terminal del altavoz y el voltaje de salida de cada uno de los puntos de prueba se ilustran a continuación:
3	Ajuste de ICQ (después de haber reparado el amplificador principal) (Fig. 21)	(Canal izq. (L)) Entre A y B (probeta negativa) (Canal der. (R)) Entre C y D (probeta negativa)	VR301 (Canal izq. (L)) VR302 (Canal der. (R))	1. Colocar los interruptor del altavoz "main" y del "remote" en la posición "off" (apagado). 2. Regular VR301 y VR302 de manera tal que el voltaje resulte 1mV aproximadamente un minuto después de haber encendido la alimentación de corriente.
4	Ajuste del reloj (después de haber cambiado el microcomputador) (Fig. 22)	* Conectar el osciloscopio a TP1	VR801	1. Regular VR801 de manera tal que el tiempo de la forma de onda sea de 2,5μs.

Carga	Punto de prueba	Especificación
4~6.5Ω	Q327 (colector)	45.0~47.0V
	TP503	−45.5~−47.5V
6.6~16Ω	Q327 (colector)	54.0~55.0V
	TP503	−54.5~55.5V
Interruptor del altavoz en "off"	Q327 (colector)	54.0~56.0V
	TP503	−54.5~−56.5V

Printed in Japan
830903600® YK

■ LOCATION OF CONTROLS


Recording-mode selector (tape dubbing 2 ▶ 1, tape dubbing 1 ▶ 2, off, phono, tuner, aux/CD/radio).
Input selector (tape 2, tape 1, phono, tuner, aux/CD/video)
Phono selector (Phono 2 MM–2.5mV, Phono 1 MM–1mV, phono 1 MM–2.5mV, phono 1 MC–250μV, phono 1 MC–100μV)
Operation indicators
Speaker selectors (Remote) (Main)
Audio muting switch (■ 0 dB, ▬ – 20 dB)
Headphones jack
Volume control
Power switch
Super-bass tone control
Super-bass turnover frequency selector (■ 150Hz, ▬ 75Hz)
Bass tone control
Treble tone control
Operation selector (■ straight DC, ▬ via tone)
Control panel door release
Computer-drive monitor indicators
Balance control
Loudness switch (■ off, ▬ on)
Mode selector (■ stereo, ▬ mono)
High-cut filter switch (■ off, ▬ 7kHz)
Subsonic filter switch (■ off, ▬ 20Hz)



* Phono input capacitance is about 150pF.

■ PROTECTION CIRCUITRY

The protection circuitry may have operated if eigher of the following conditions is noticed:

- No sound is heard when the power is turned on.
- Sound stops during performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker with an impedance less than the indicated rated impedance of the amplifier are used.

If this occurs, follow the procedure outlined below:

1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again

Note:

When the protection circuitry functions the unit will not operate unless the power is first turned off and then on again.

■ BEFORE REPAIR AND ADJUSTMENT

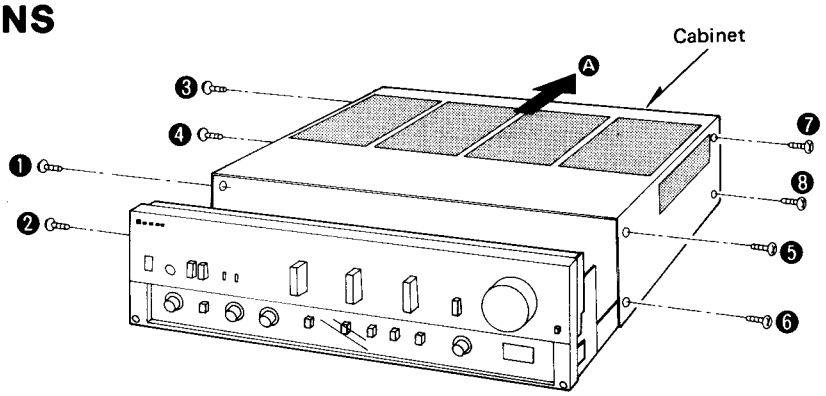
1. Turn off the power supply and short-circuit of power supply capacitors (C606, C607, 56V 18000μF) at resistance (about 10Ω, 5W) in order to discharge the charged voltage. Do not short between C606, C607 by screwdriver. It may damage the component.
2. Before turning on the power supply after completion of repair, slowly apply the primary voltage by using a power supply voltage controller to make sure that the consumed current is free of abnormality. The consumed current at 60Hz/50Hz in no signal mode is shown below with respect to supply voltage 110V/120V/220V/240V.

Power supply voltage		AC110V	AC120V	AC220V	AC240V
Cousumed current	50 Hz	400 ~ 800mA	370 ~ 740mA	190 ~ 380mA	170 ~ 350mA
	60 Hz	370 ~ 740mA	340 ~ 680mA	180 ~ 350mA	160 ~ 330mA

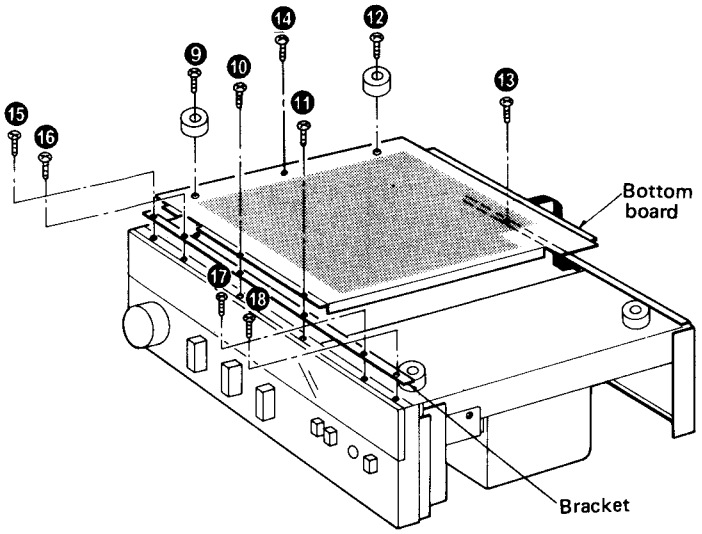
■ DISASSEMBLY INSTRUCTIONS

- **How to remove the cabinet** [Fig. 1]

1. Remove the 8 setscrews (Fig. 1: ❶ ~ ❽) on the side of the cabinet.
2. Remove the cabinet in the direction of arrow Ⓐ (Fig. 1)



[Fig. 1]



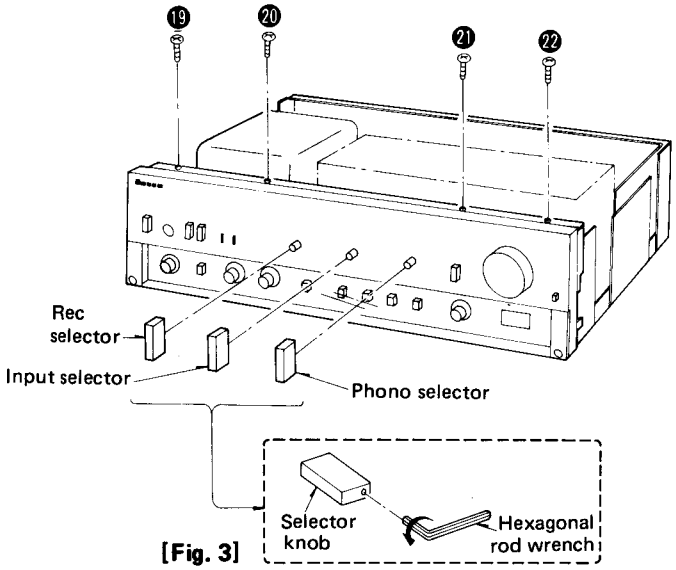
[Fig. 2]

- **How to remove the bottom board** [Fig. 2]

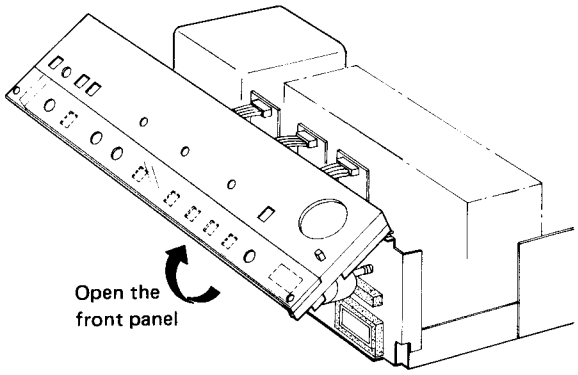
1. Remove the 6 setscrews (Fig. 2: ❾ ~ ⓮) on the bottom board.

• How to remove the front panel [Fig. 3, 4]

1. Remove the cabinet and bottom board.
2. Remove the 3 selector knobs. (Use hexagonal rod wrench for M3 screws.) Refer to Fig. 3.
3. Remove the 8 setscrews (Fig. 2 ⑮~⑱ and Fig. 3 ⑲~㉓) of the front panel.
4. Remove the front panel refer to fig. 4.



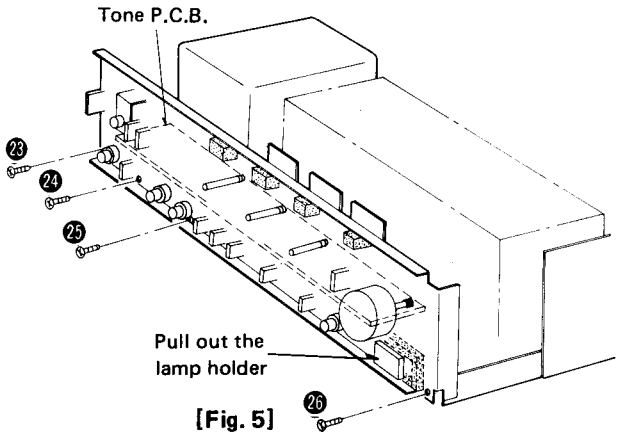
[Fig. 3]



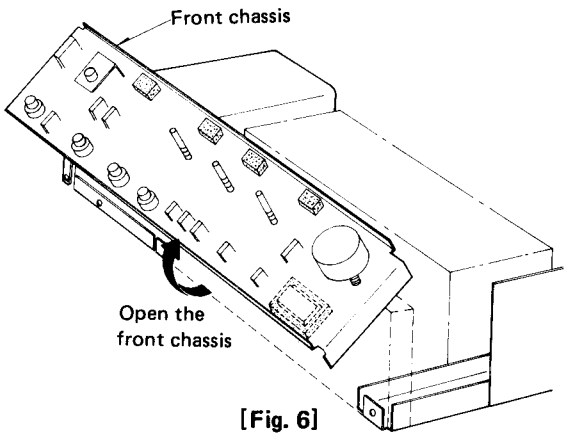
[Fig. 4]

• How to check the tone circuit P.C.B. [Fig. 5, 6]

1. Remove the cabinet.
2. Remove the front panel and bottom board.
3. Remove the 4 setscrews (Fig. 5: ㉓~㉖)
4. Open the front chassis in the direction of the arrow so that the tone control circuit P.C.B. can be checked. (see Fig. 6)



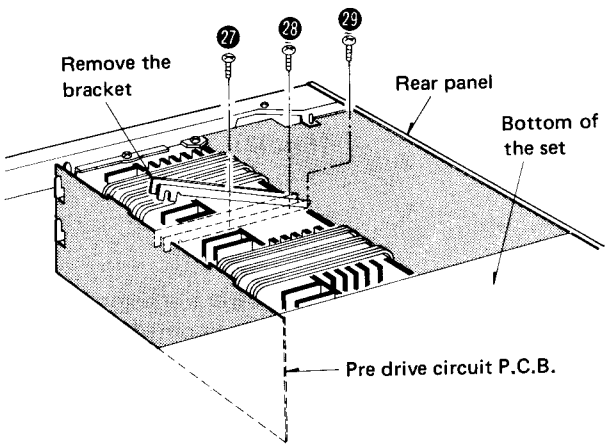
[Fig. 5]



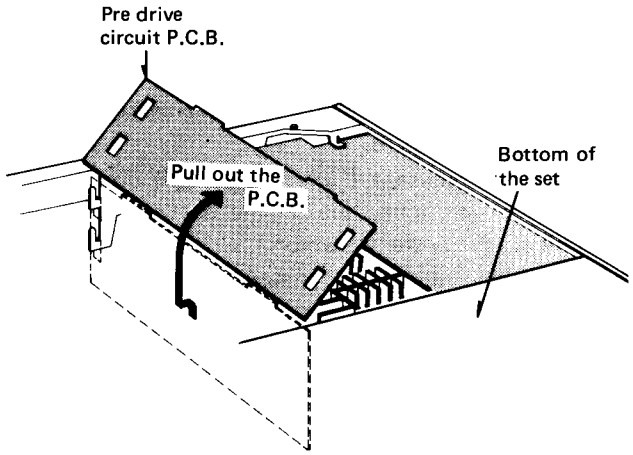
[Fig. 6]

• How to check the pre drive circuit P.C.B. [Fig. 7, 8]

1. Remove the cabinet and bottom board.
2. Remove the 3 setscrews (Fig. 7: ㉗~㉙) of the bracket.
3. Pull out the pre drive circuit P.C.B. in the direction of the arrow (See. Fig. 8)



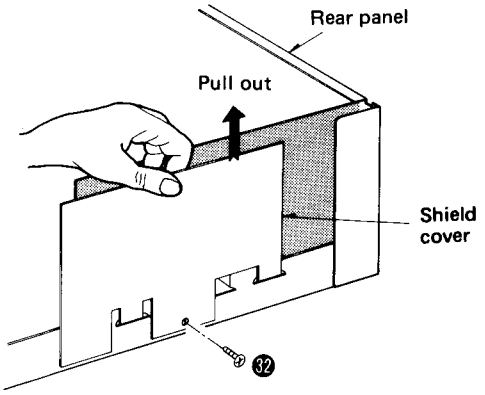
[Fig. 7]



[Fig. 8]

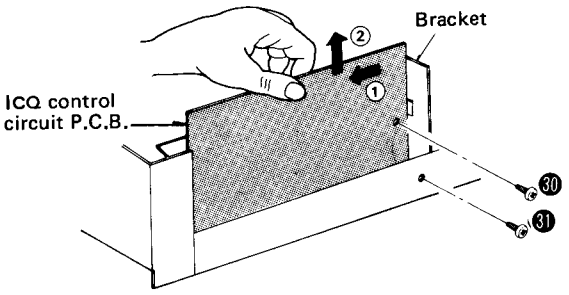
• How to remove the I_{CQ} control circuit P.C.B. [Fig. 9, 10]

1. Remove the cabinet.
2. Remove the setscrew (Fig. 9: ㉜) of the shield cover.
3. Remove the shield cover.



[Fig. 9]

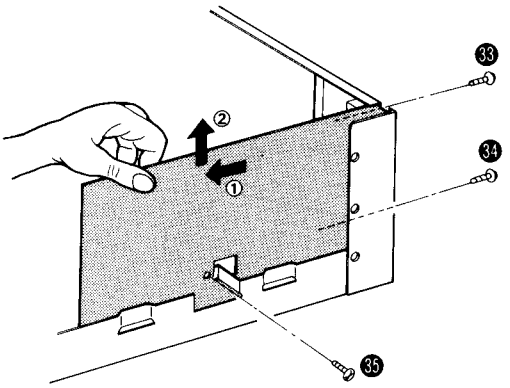
4. Remove the 2 setscrews (Fig. 10: ㉚ ㉛) and then pull out the I_{CQ} control circuit P.C.B. from bracket in the direction of the arrow. (See Fig. 10.)



[Fig. 10]

• How to remove the equalizer circuit P.C.B. [Fig. 11]

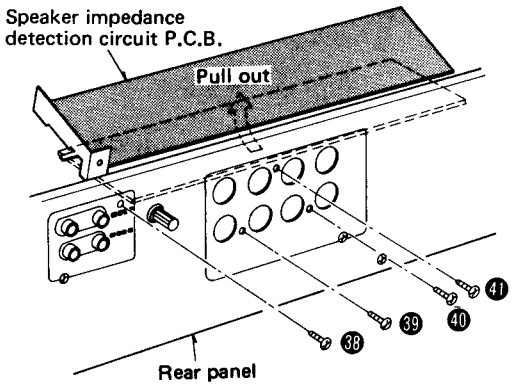
1. Remove the cabinet.
2. Remove the setscrew (Fig. 9: ㉜) of the shield cover.
3. Remove the shield cover.
4. Remove the 3 setscrews (Fig. 11: ㉝~㉟) and then pull out the equalizer circuit P.C.B. from rear panel in the direction of the arrows. (See Fig. 11)



[Fig. 11]

• How to remove the speaker impedance detection circuit P.C.B. [Fig. 12]

1. Remove the cabinet.
2. Remove the 4 setscrews (Fig. 12: ㊳ ~㊶) of the rear panel.
3. Remove the speaker impedance detection circuit P.C.B. in the direction of the arrow. (See Fig. 12)

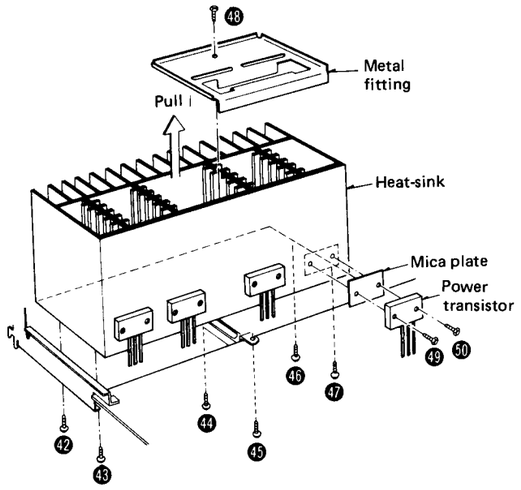


[Fig. 12]

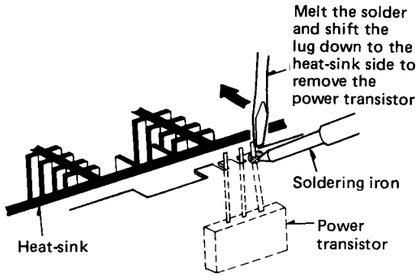
• How to remove the Power transistor [Fig. 13 ~ 15]

1. Remove the cabinet and bottom board.
2. Unsolder the 4 power transistors as shown in Fig. 13.
3. Remove the 6 setscrew (Fig. 14: ㊷~㊼) of the heat sink.
4. Remove the setscrew (Fig. 14: ㊽) of the metal fitting.
5. Remove the transistors along with the heat-sink from the printed circuit board.
6. Remove the 2 setscrews (Fig. 14: ㊾ , ㊿) used to secure the power transistors on the heat-sink, and then pull out the power transistor.
7. When installing the power transistor, apply heat diffusing agent (silicon powder, etc.) to both sides of the mica plate, and secure it on the heat-sink with setscrews. Next, secure the heat-sink on the chassis and then solder the power transistor.

Note: When soldering the power transistor, press the transistor legs against the printed board. (See Fig. 15)

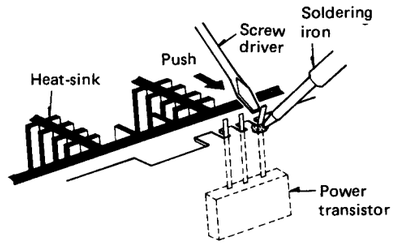


[Fig. 14]


Melt the solder and shift the lug down to the heat-sink side to remove the power transistor
Soldering iron
Heat-sink
Power transistor

When unsolder the power transistor

[Fig. 13]



When soldering the power transistor

[Fig. 15]

■ MEASUREMENTS AND ADJUSTMENTS

- **Setting of controls and instruments to be used.**

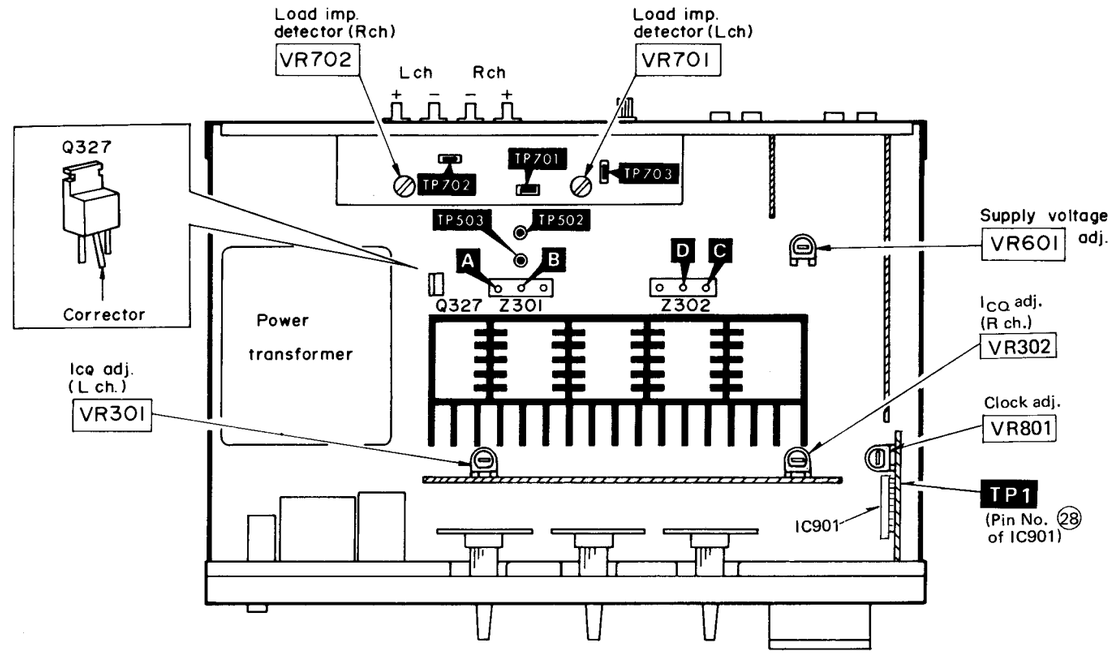
1. Before the adjustment, VR301, VR302 and VR601 should be turned to counter-clockwise direction, VR701, VR702 and VR901 should be turned to center position.
2. Sound volume ... 0 (minimum)
3. Main speaker switch ... on
4. Remote speaker switch ... off
5. Operation selector ... straight DC
6. DC voltmeter (capable to measure 5mV)
7. Oscilloscope

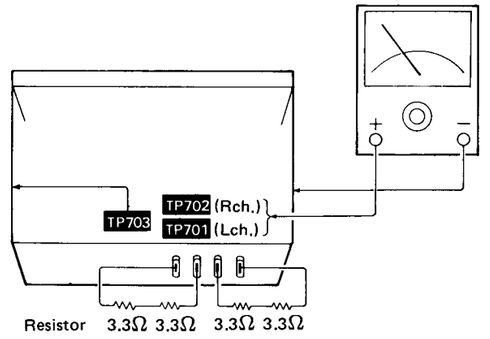
No.	Item	Connection of DC voltmeter or oscilloscipe	VR adjusted	Adjustment
1	Adjustment of load impedance detection circuit (after reparing the speaker impedance detection circuit (Fig. 16)	* Connect a load with series-connected 3.3Ω and 3.3Ω (1/2W, ±5%) to the "main" speaker terminal, (both L and R channel) * Connect a DC voltmeter between TP701 and chassis. (L ch.) * Connect a DC voltmeter between TP702 and chassis. (Rch.) * Connect TP703 and chassis.	VR701 (L channel) VR702 (R channel)	1. Completely turn VR701 clockwise. 2. Adjust VR702 so that the voltage of TP702 is +0.18V ~ −0.2V 3. Adjust VR701 so that the voltage of TP701 is +0.18V ~ −0.2V
2	Supply voltage adjustment & check (after reparing the power supply circuit) (Fig. 17)	* Connect voltmeter to Q327 (Collector) and TP502 . * Set the speaker selector to "main" when measuring the voltage. * If power supply of the set is ON, changing the load impedance will not cause alteration of supply voltage. So, turn off power supply or shift the speaker selector to other position. * With speaker selector set at main and remote, the voltage at 4 ~ 6Ω is indicated.	VR601	1. Connect 8Ω load to main speaker terminal. 2. Adjust VR601 so that voltage is +54.5V. 3. Load resistanced to speaker terminal and output voltage at each test point are shown below.

Load	Test point	Specification
4~6.5Ω	Q327(collector)	45.0~ 47.0V
	TP503	−45.5 ~−47.5V
6.6~16Ω	Q327(collector)	54.0~ 55.0V
	TP503	−54.5 ~−55.5V
Speaker switch to "off"	Q327 (collector)	54.0~ 56.0V
	TP503	−54.5 ~−56.5V

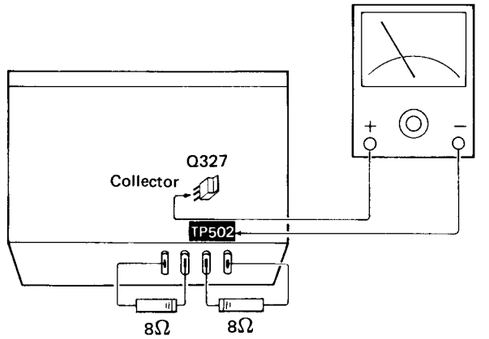
3	Adjustment of I_{CQ} (after reparing the main amp) (Fig. 18)	(L channel) Between A and B (minus probe) (R channel) Between C and D (minus probe)	VR301 (L channel) VR302 (R channel)	1. Set the main and remote speaker switches to "off" position. 2. Adjust VR301 and VR302 so that the voltage is 1mV about 1 min. after power supply ON.
4	Adjustment of clock (after replacing the micro-computer) (Fig. 19)	* Connect the Oscilloscope to TP1	VR801	1. Adjust VR801 so that period of waveform is 2.5μsec.

■ ADJUSTMENT POINTS

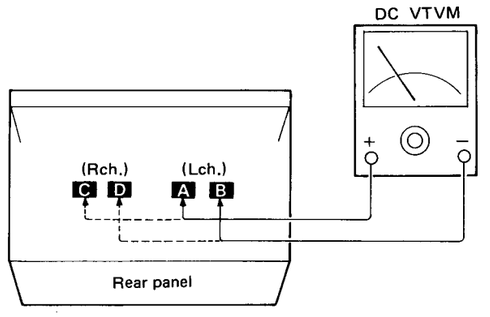




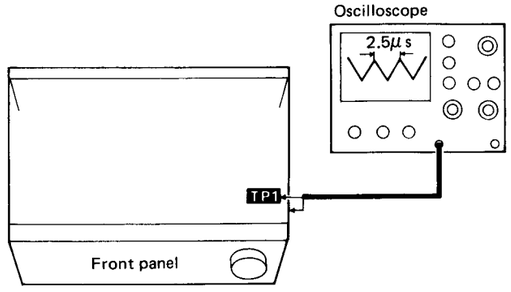
[Fig. 16]
Adjustment of load impedance detection circuit



[Fig. 17]
Supply voltage adjustment

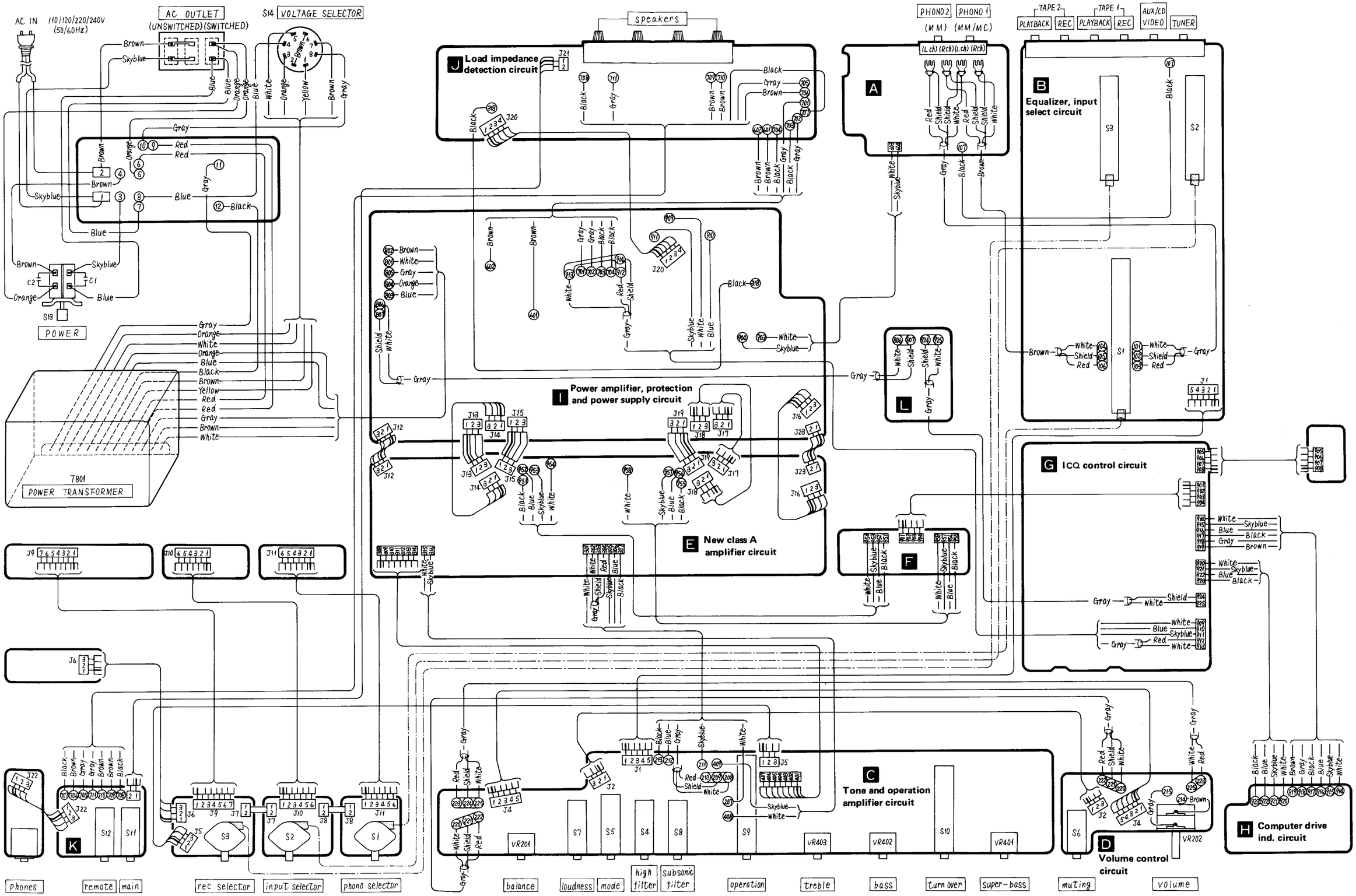


[Fig. 18]
Adjustment of I_{CQ}



[Fig. 19]
Adjustment of clock

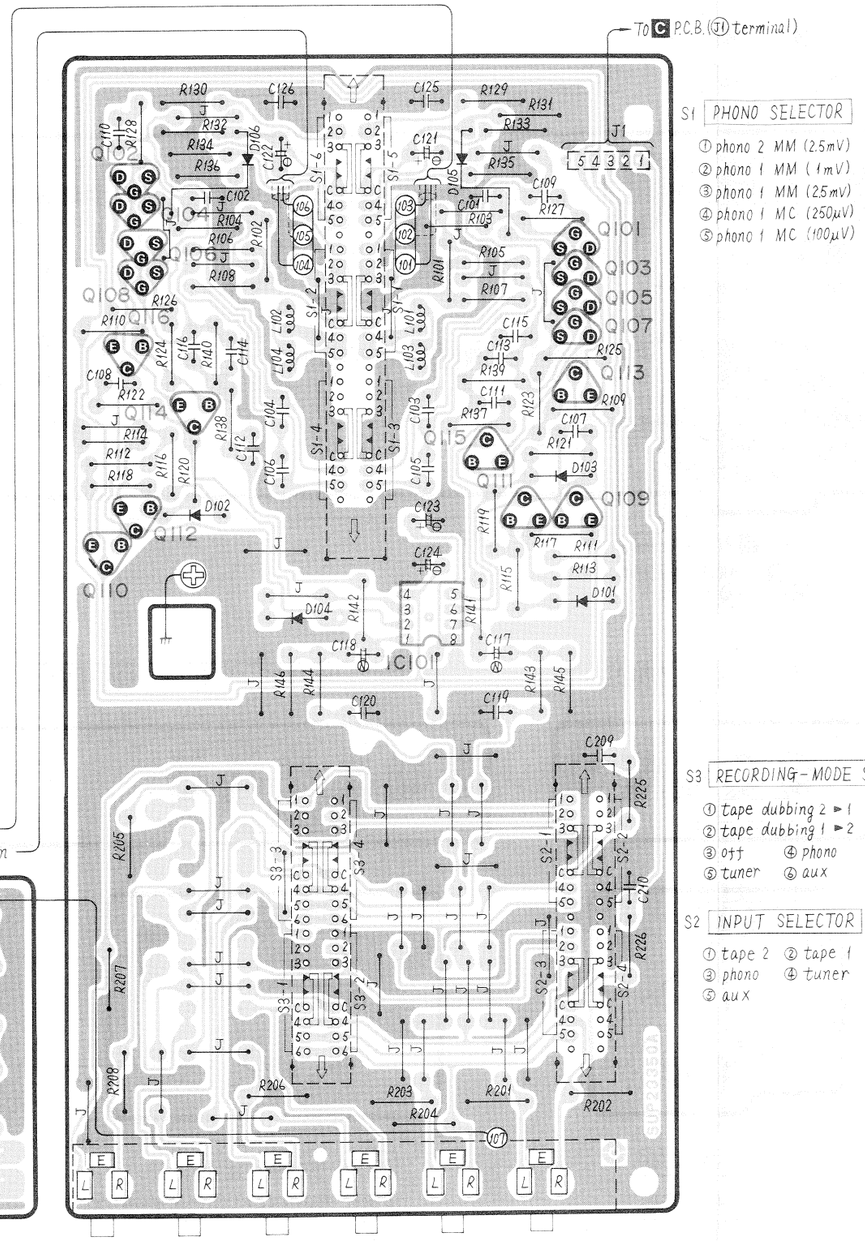
■ CIRCUIT BOARDS AND WIRING CONNECTION DIAGRAM (Top view)



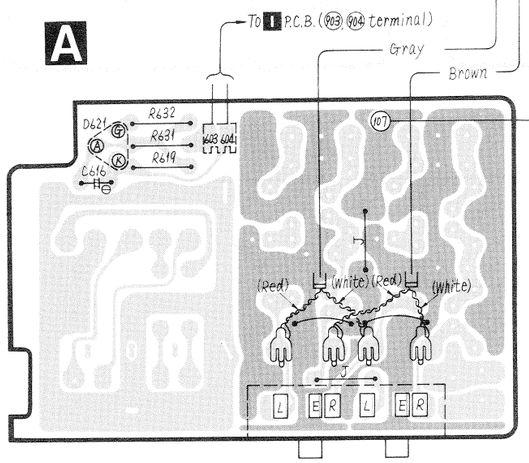
■ PRINTED CIRCUIT BOARDS

Ground (Earth) lines

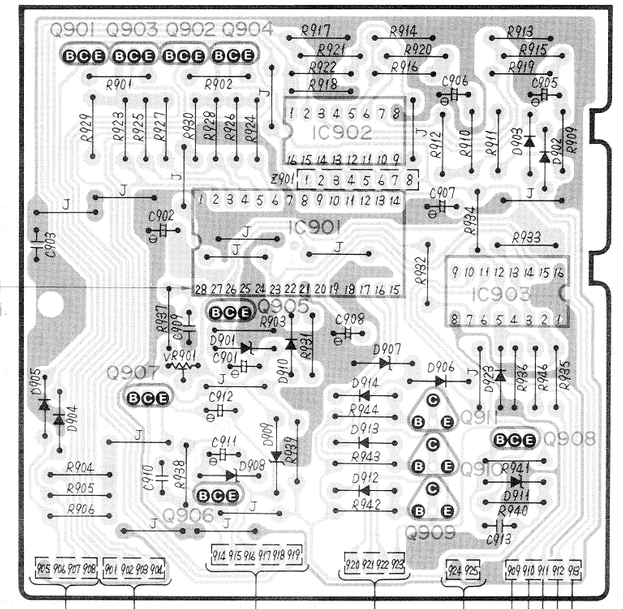
B Equalizer and input selector circuit



A



G ICQ control circuit



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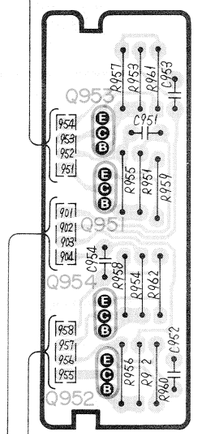
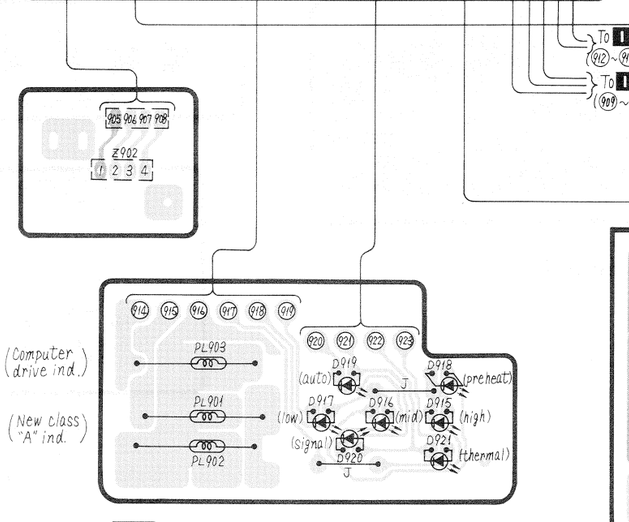
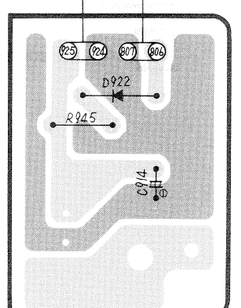


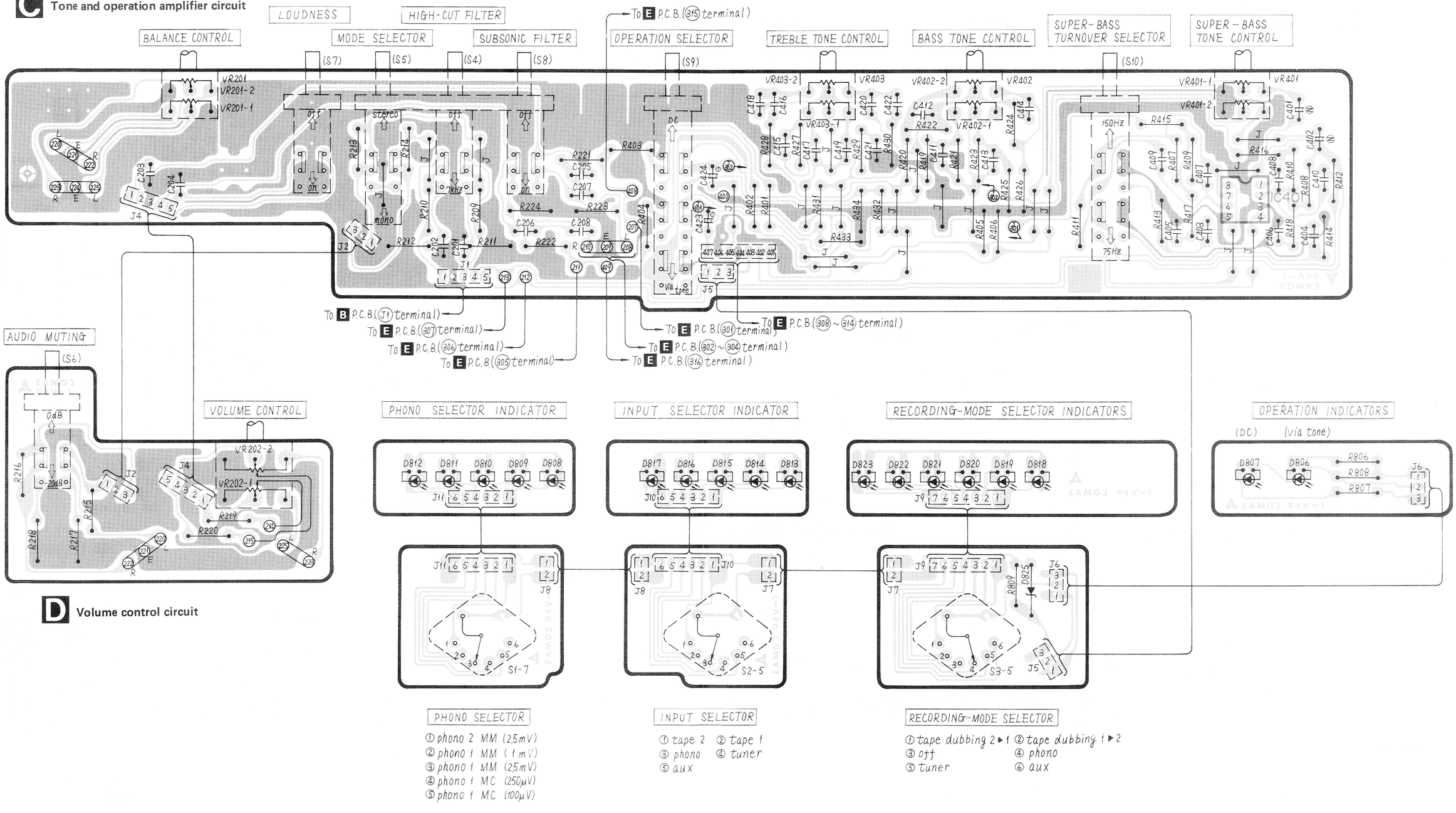


H Computer drive ind. circuit

L



C Tone and operation amplifier circuit



D Volume control circuit

PHONO SELECTOR

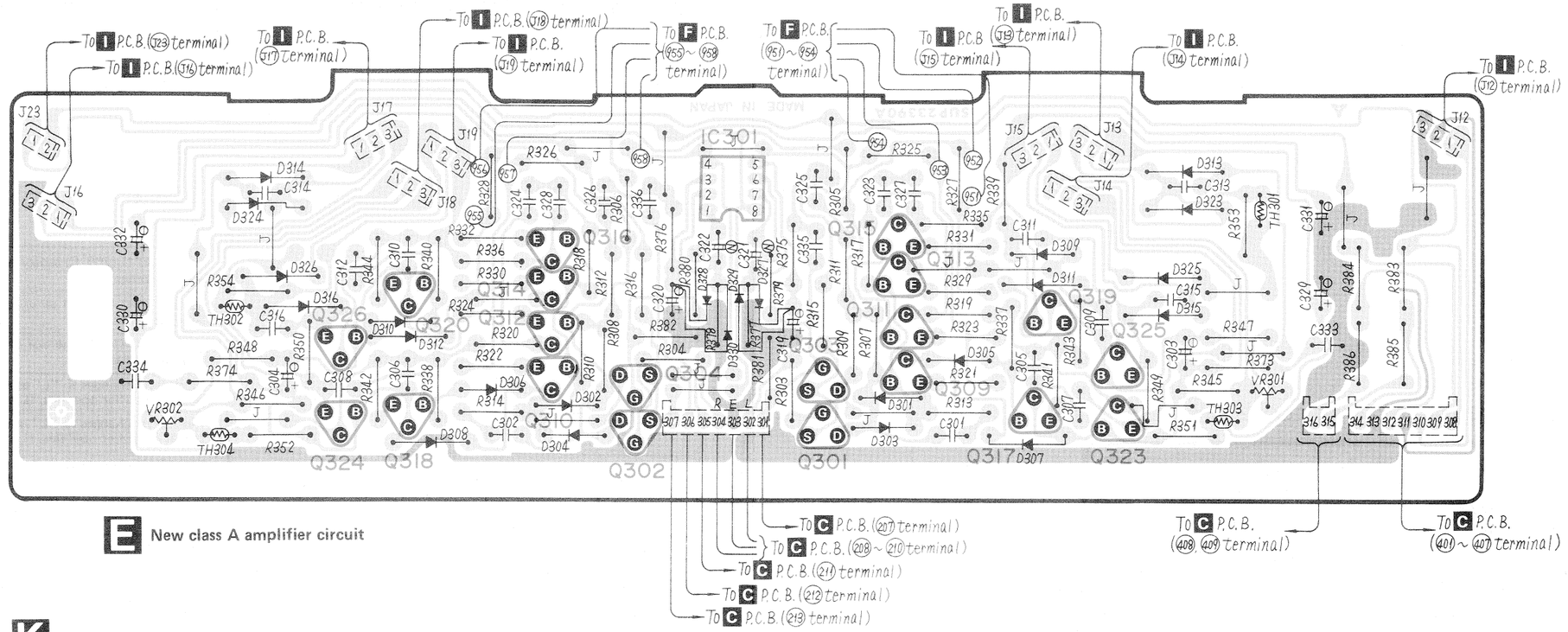
① phono 2 MM (2.5mV)
② phono 1 MM (1mV)
③ phono 1 MM (2.5mV)
④ phono 1 MC (250μV)
⑤ phono 1 MC (100μV)

INPUT SELECTOR

① tape 2 ② tape 1
③ phono ④ tuner
⑤ aux

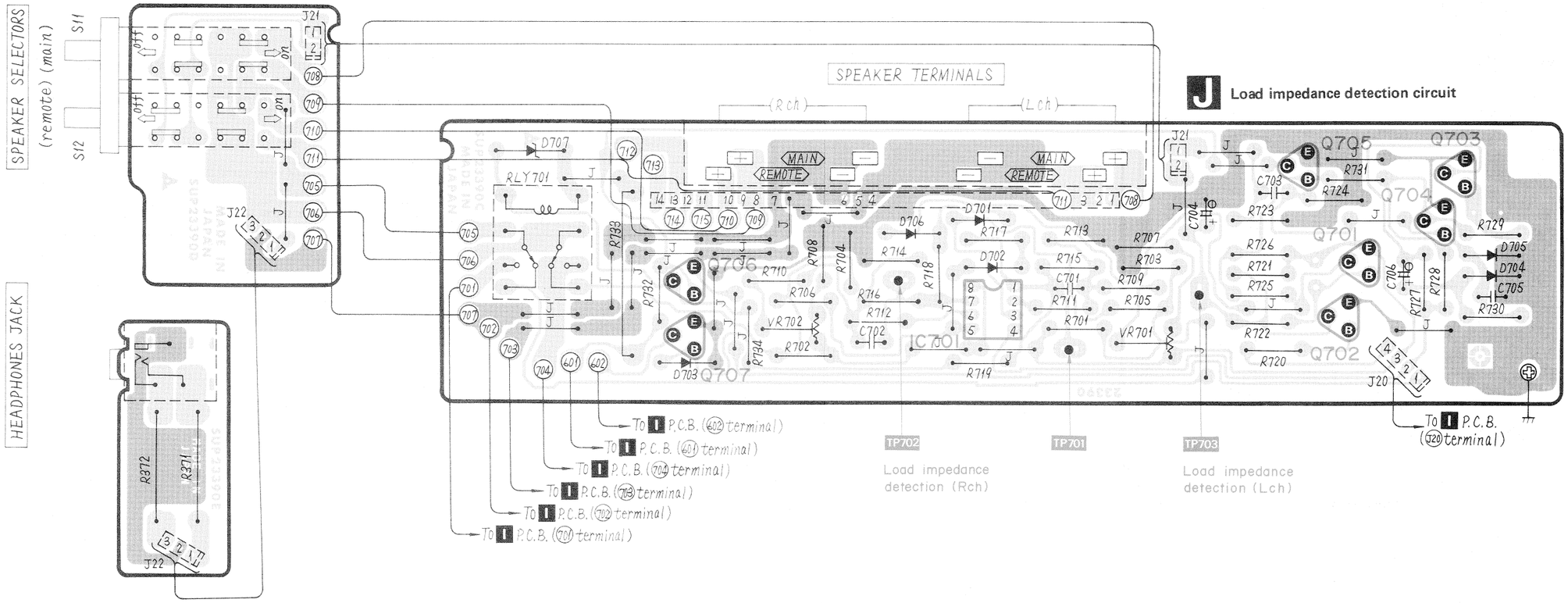
RECORDING-MODE SELECTOR

① tape dubbing 2▶1 ② tape dubbing 1▶2
③ off ④ phono
⑤ tuner ⑥ aux

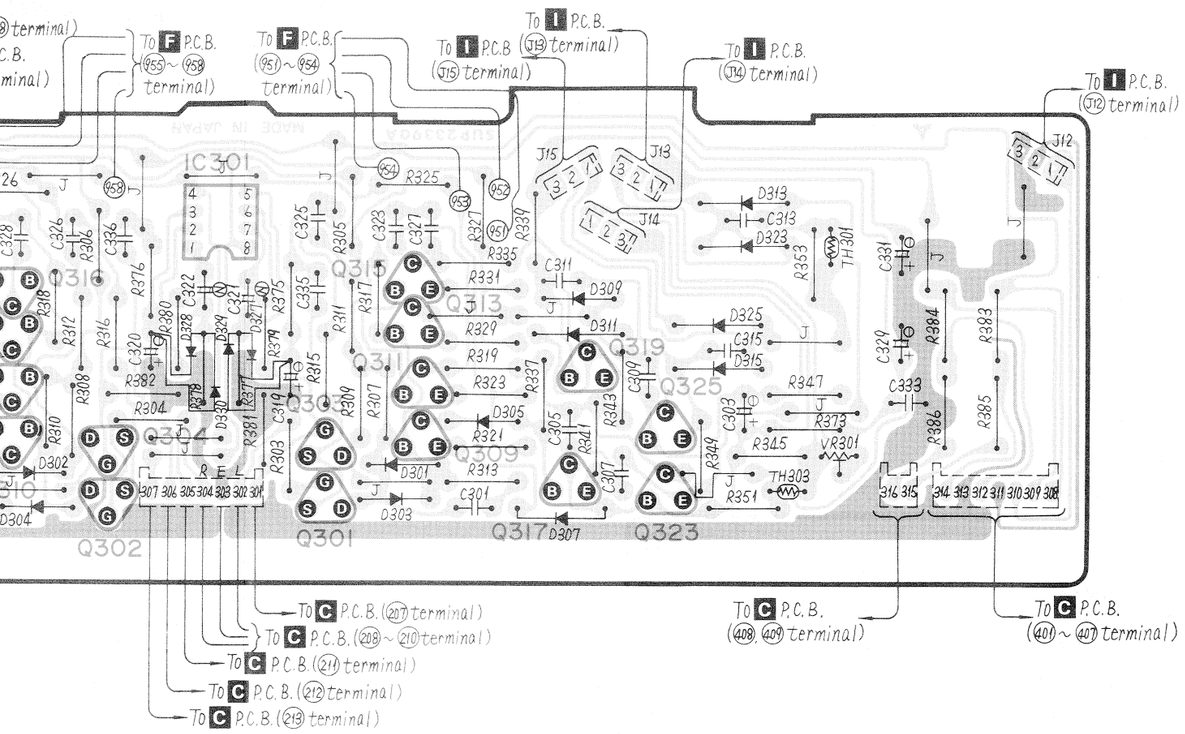


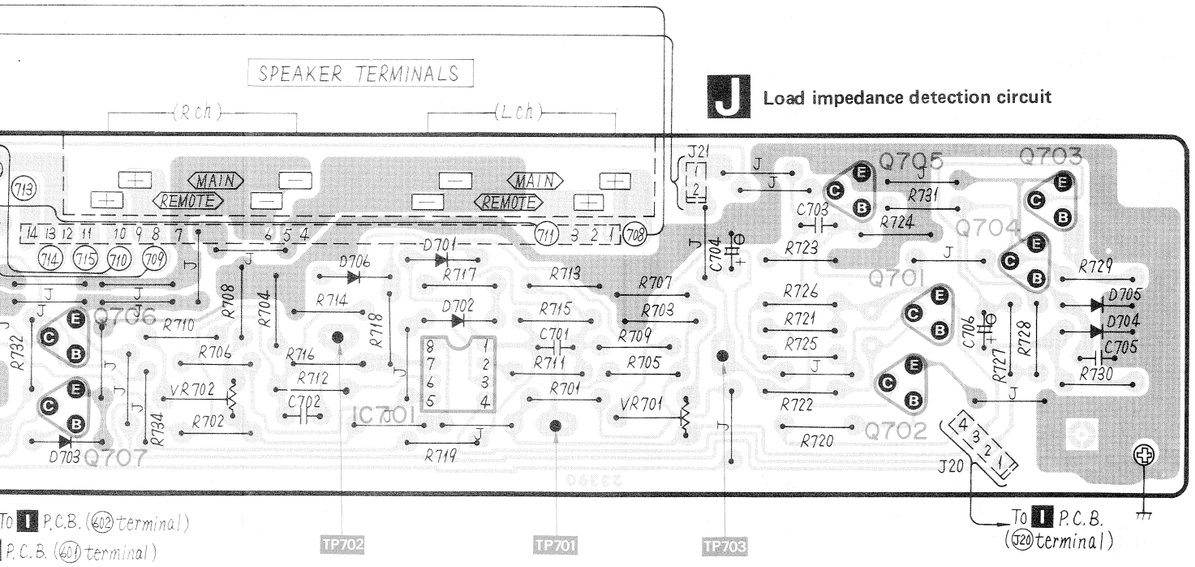
E New class A amplifier circuit

K



J Load impedance detection circuit





J **Load impedance detection circuit**

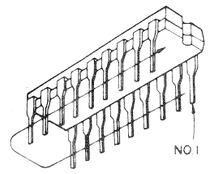
TP702 Load impedance detection (Rch)

TP701

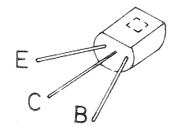
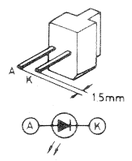
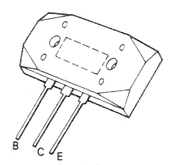
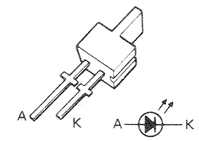
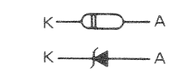
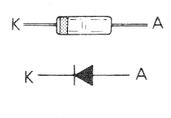
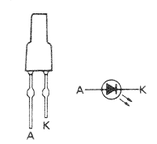
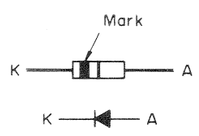
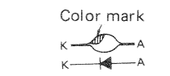
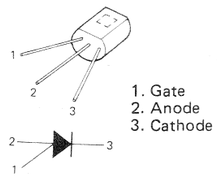
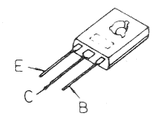
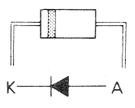
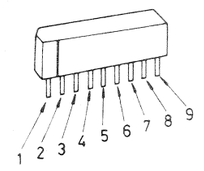
TP703 Load impedance detection (Lch)

To I P.C.B. (J20 terminal)

• Terminal guide of transistors, diodes and IC's



28 Pin	MN1421STA
18 Pin	AN6552
18 Pin	SVITD62501P
8 Pin	SVINJ4559DSM

			2SA721 2SC1815 2SC1980 2SC1980 2SA921 2SA1123 2SC2631 2SC2632 2SA1124 2SA774 2SC1509 2SA722 2SC1815 2SA1015 2SA777NCR
LN820WP, LN420WP	2SA1170 2SC2774	LN833WP	
			SVDMZ□□□□
MA150	SVDAY5533K-M, SVDBG5533K-1	MA162A, MA162	
			SVDMA26-2, SVDMA26-1 
SVTTT202-50	2SC1576	SVDSR1K4 SVDSR1K2	SVITA7317P
			
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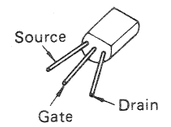
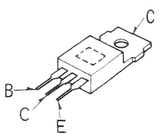
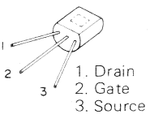
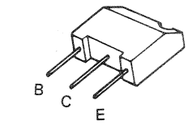
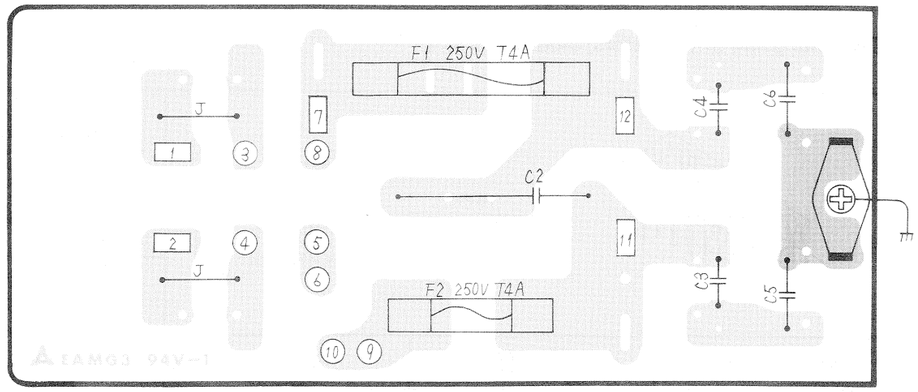
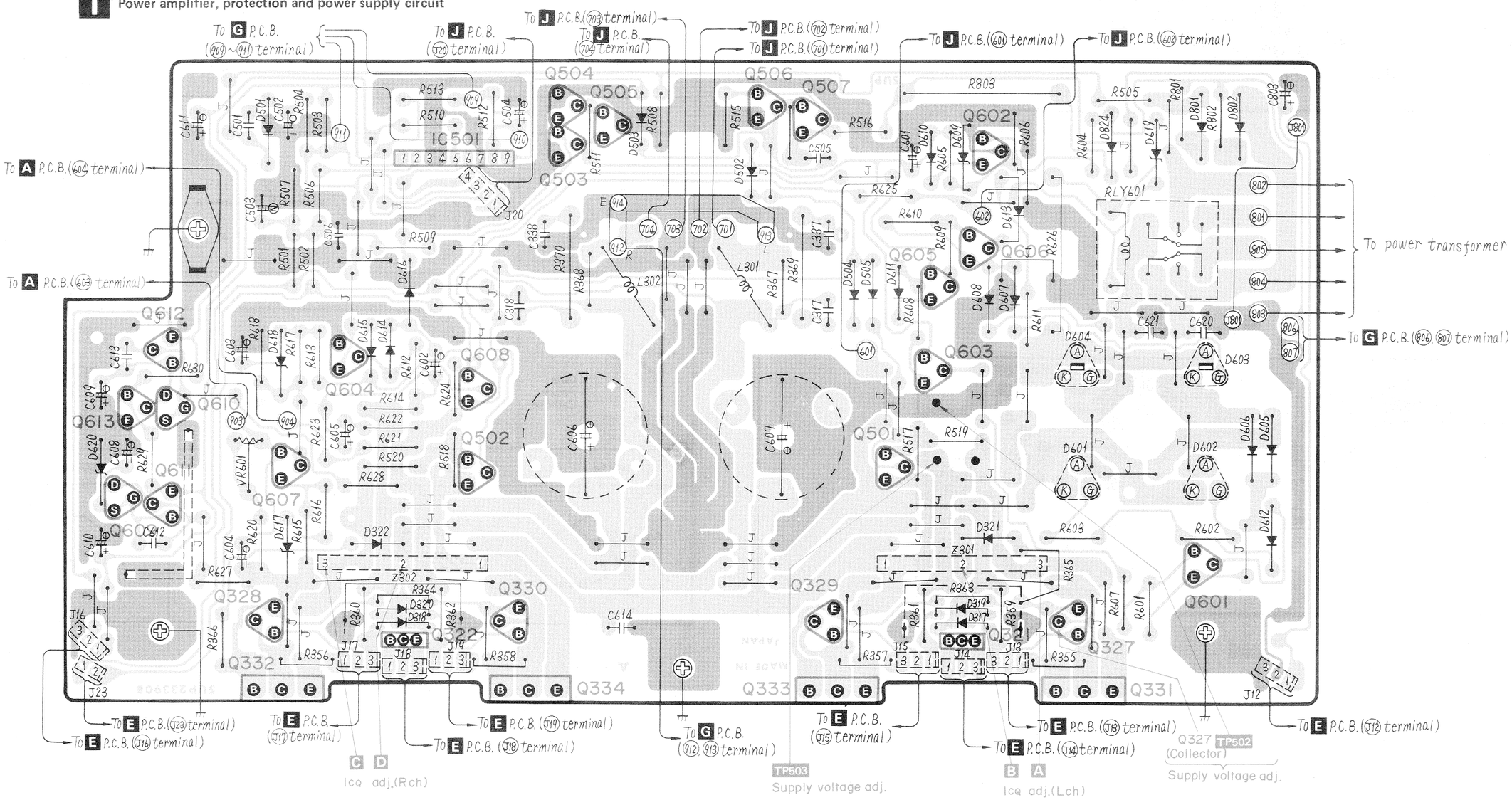
			

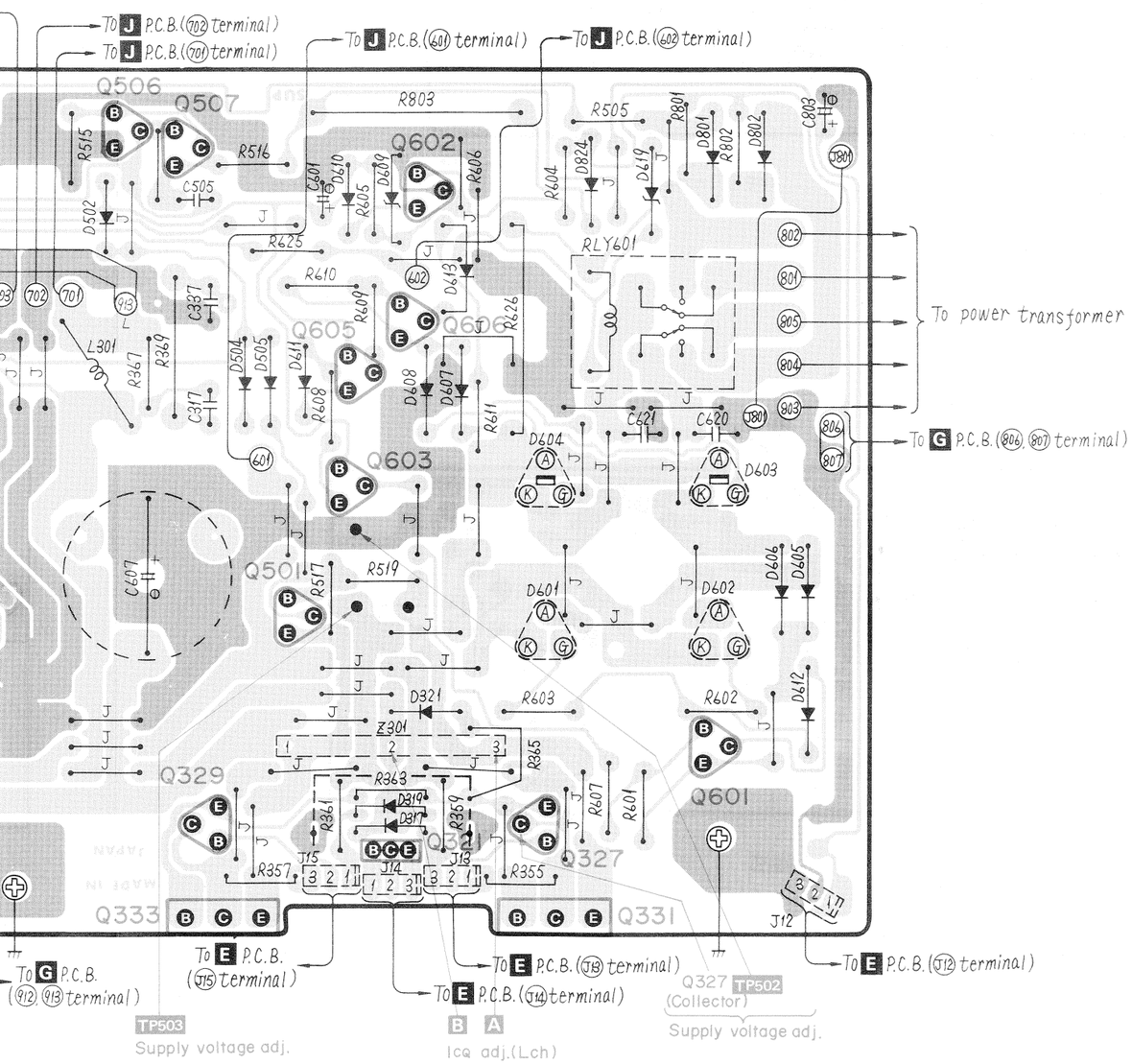


I Power amplifier, protection and power supply circuit



FUNCTIO

Pin No.	Ma
1	Vs
2	CC
3	CC
4	CC
5	CC
6	CC
7	AI
8	AI
9	AI
10	AI
11	BI
12	BI
13	BI
14	BI
15	EC
16	EC
17	EC
18	EC
19	TS
20	RS
21	SN
22	SN
23	DC
24	DC
25	DC
26	DC
27	VD
28	OS



19

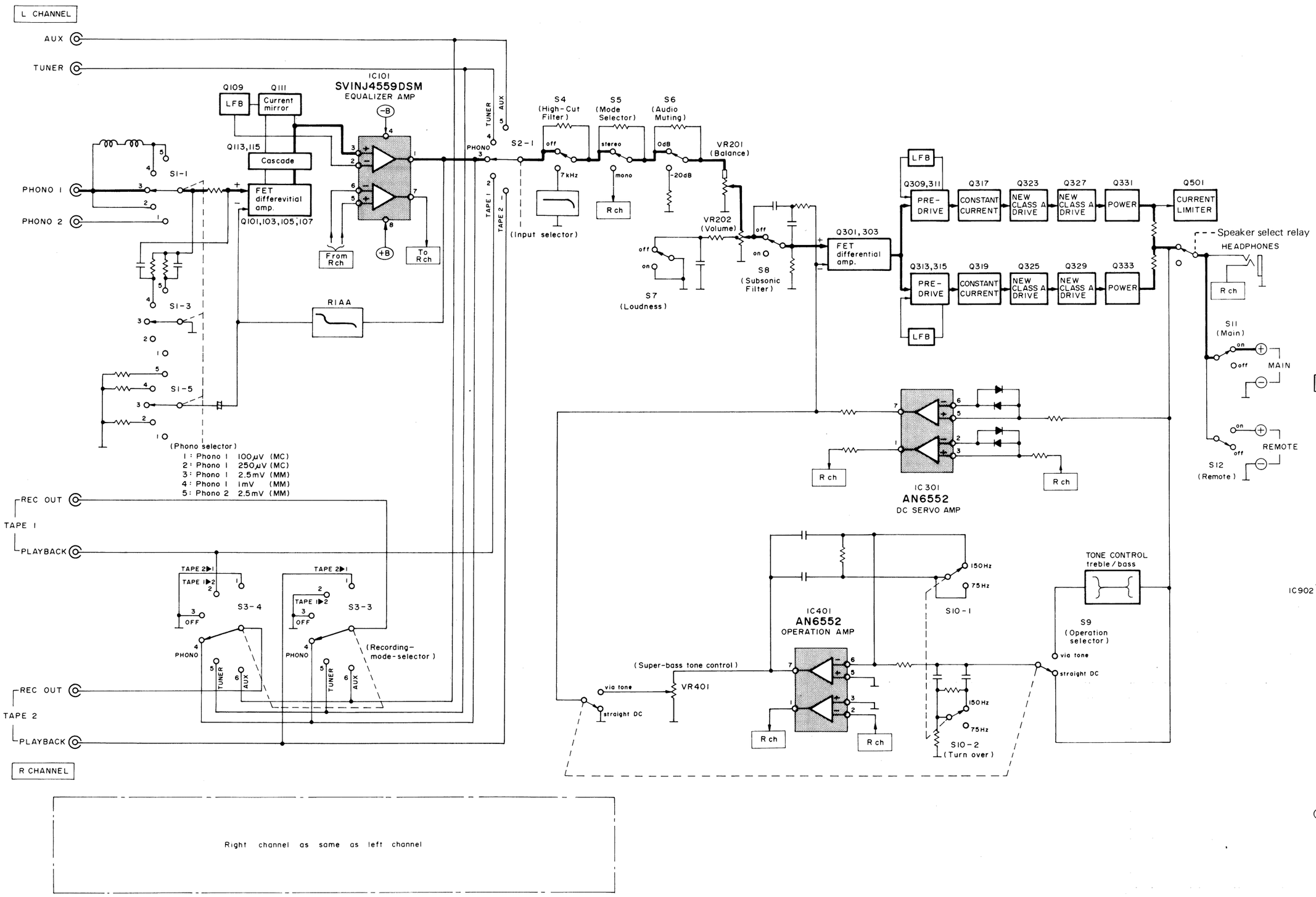
■ FUNCTION OF TERMINAL (Icq CONTROLLER IC901)

Pin No.	Mark	Name of block	Description of terminal
1	Vss	Power supply input terminal	Grounded (0V)
2	CO_9	Output port C	It delivers Icq control signal through input port A (thermal sensor) and input port B (signal sensor). [Output "L"]
3	CO_8		
4	CO_7		
5	CO_6		
6	CO_5		
7	AI_3	Input port A	Not used in this unit.
8	AI_2		When 130°C (266°F) sensor of power amplifier operates, the input level becomes "H".
9	AI_1		When 100°C (212°F) sensor of power amplifier operates, the input level becomes "L".
10	AI_0		When 60°C (122°F) sensor of power amplifier operates, the input level becomes "L".
11	BI_3	Input port B	Input level changes to "L" as effective output 2V signal sensor of power amplifier operates. (L ch.)
12	BI_2		Input level changes to "L" as effective output 5V signal sensor of power amplifier operates. (L ch.)
13	BI_1		Input level changes to "L" as effective output 2V signal sensor of power amplifier operates (R ch.)
14	BI_0		Input level changes to "L" as effective output 5V signal sensor of power amplifier operates. (R ch.)
15	EO_0	Output port E	Indicator "thermal" lights up at "L" output.
16	EO_1		Indicator "signal" lights up at "L" output.
17	EO_2		Indicator "auto" lights up at "L" output.
18	EO_3		Not used in this unit.
19	TST	Test input terminal	Terminal for testing LSI (Grounded)
20	RST	Reset input terminal	All outputs are cleared or reset with input at "L". (It is connected to power supply circuit)
21	SNS_0	Sensor input terminal	Conditional transfer (branch) is performed according to the input level.
22	SNS_1		Input level changes to "H" as power amplifier output short-circuit operates.
23	DO_0	Output port D	Output terminal for indicator "preheat" and preheating circuit operation. [Output "L"]
24	DO_1		Not used in this unit.
25	DO_2		
26	DO_3		Output relay turns ON with output at "H"
27	VDD	Power supply input terminal	Apply 5V.
28	OSC	OSC input terminal	Clock signal (about 400 kHz) can be obtained by internal oscillation circuit.

20

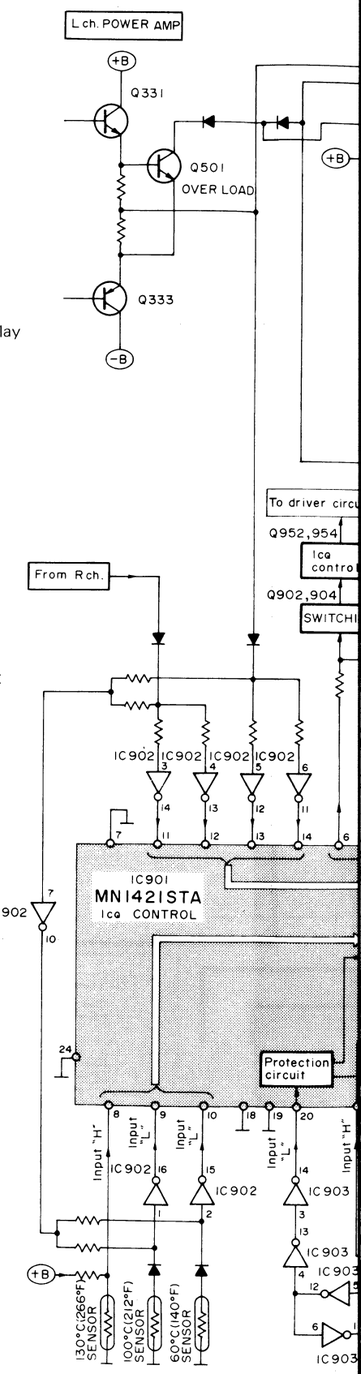
■ BLOCK DIAGRAM

- Equalizer, Input selector and Power amplifier circuit

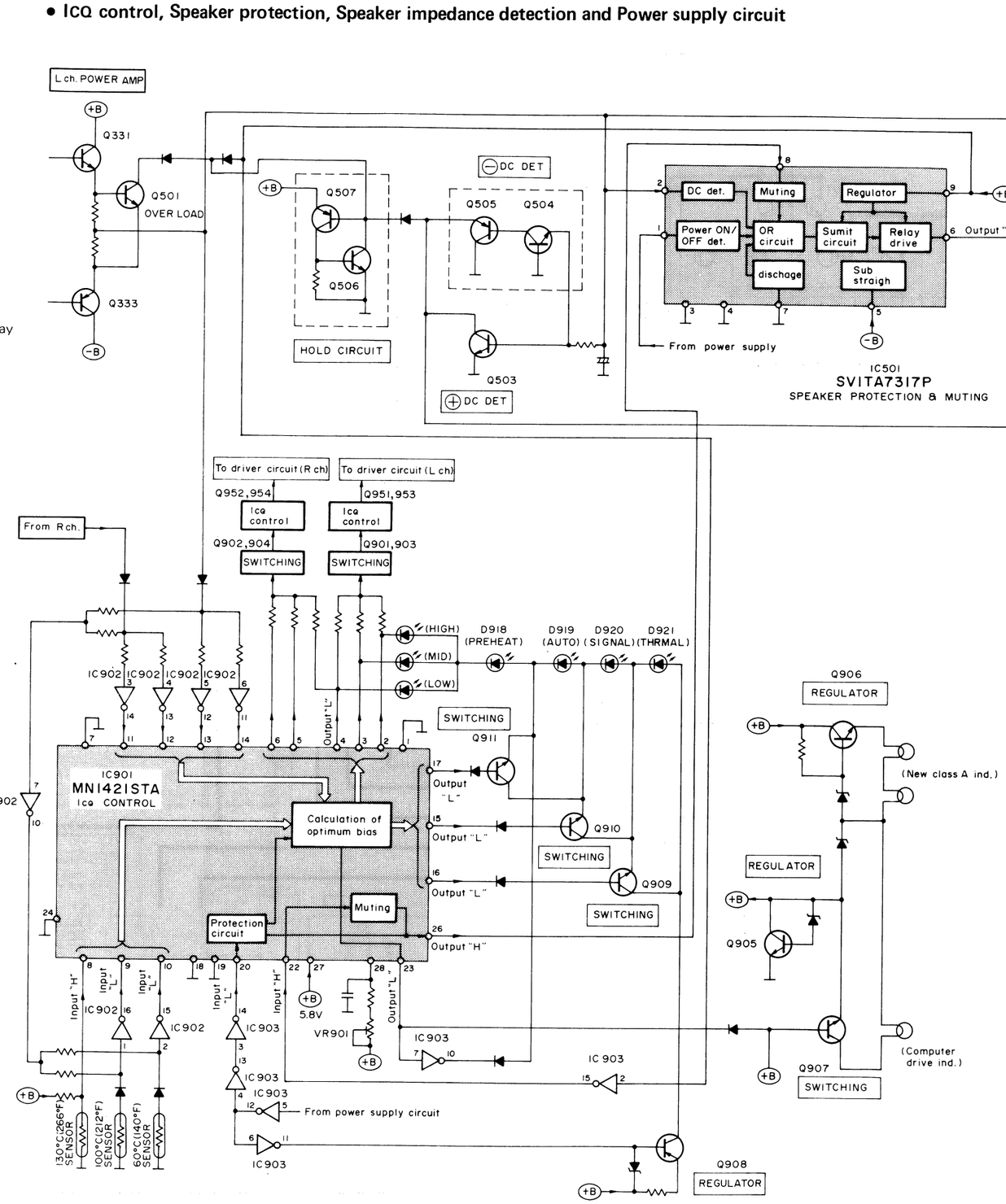


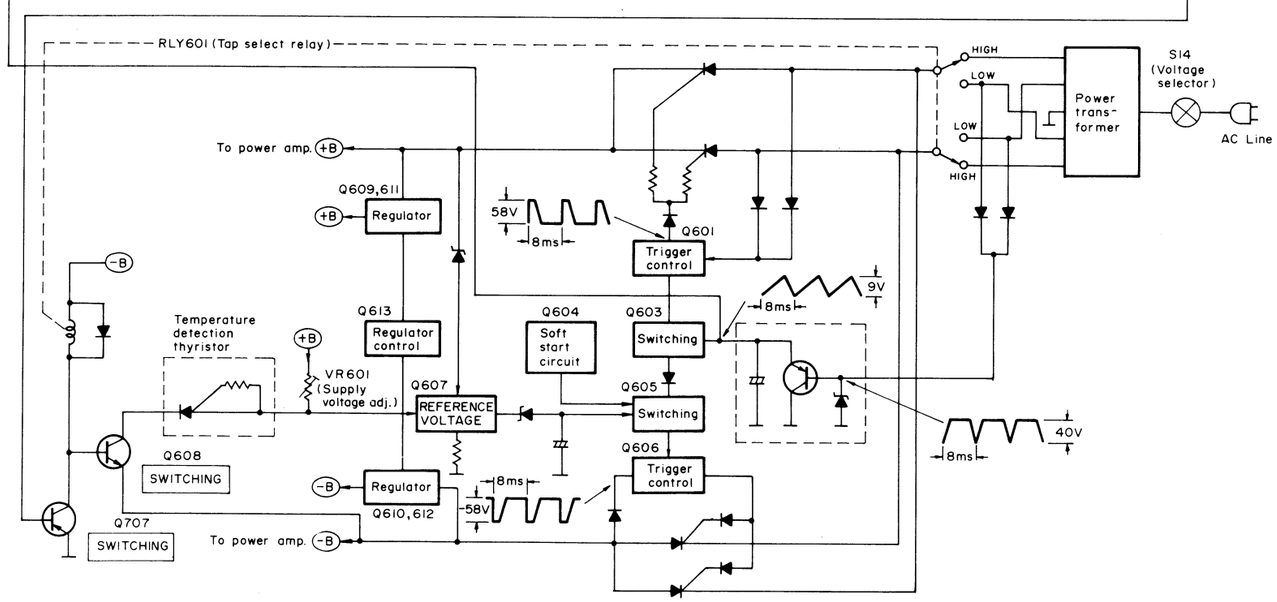
Right channel as same as left channel

- Ico control, Speaker protec



• ICQ control, Speaker protection, Speaker impedance detection and Power supply circuit





■ SCHEMATIC DIAGRAM

(This schematic diagram may be modified at any time with the development of new technology.)

1 2 3 4 5 6 7 8 9 10

A B C D E F

(L ch)
PHONO 1 (MM/MC)
PHONO 2 (MM)
(R ch)
PHONO 1 (MM/MC)
PHONO 2 (MM)

D621 SVTTT202-5-0

A

Q101~108 2SK170 DIFFERENTIAL AMP
Q111, 112 2SA721 CURRENT MIRROR
Q109, 110 2SA1015 LINEAR FEEDBACK
Q113~116 2SC1815 CASCADE
D101, 102, 105, 106 SVDMA26-1
D103, 104 MA150

S1 (PHONO SELECTOR)
① Phono 2 MM (2.5mV)
② Phono 1 MM (1mV)
③ Phono 1 MM (2.5mV)
④ Phono 1 MC (250μV)
⑤ Phono 1 MC (100μV)

B Equalizer and input selector circuit

IC101 SVINJ4559DSM EQUALIZER

S2 (INPUT SELECTOR)
① tape 2
② tape 1
③ phono
④ tuner
⑤ aux

(L ch)
TUNER
AUX/CD/VIDEO
REC OUT TAPE 1 PLAYBACK
REC OUT TAPE 2 PLAYBACK
(R ch)
TUNER
AUX/CD/VIDEO
REC OUT TAPE 1 PLAYBACK
REC OUT TAPE 2 PLAYBACK

S3 (RECORDING-MODE SELECTOR)
① tape dubbing 2 ▶1
② tape dubbing 1 ▶2
③ off
④ Phono
⑤ tuner
⑥ aux

C Tone and operation amplifier circuit

Via tone signal

S10 (SUPER-BASS TURNOVER SELECTOR)

IC401 AN6552 OPERATION

S4 (HIGH-CUT FILTER) off — 7KHz
S5 (MODE SELECTOR) Stereo — mono
S6 (AUDIO MUTING) 0dB — -20dB
S7 (LOUDNESS) off — on
(VOLUME CONTROL)
(BALANCE)

D Volume control circuit

C Tone and operation amplifier circuit

E New class A amplifier circuit

Via tone signal

ICQ adjustment (L ch.)

ICQ adjustment (R ch.)

Negative voltage (−B) line

IC401 AN6552 OPERATION AMP.

IC301 AN6552 DC SERVO

Q301～304 2SK170 DIFFERENTIAL

Q309～312 2SC1980 PRE DRIVE

Q313～316 2SA921 PRE DRIVE

Q317, 318 2SA1123 CONSTANT CURRENT

Q319, 320 2SC2631 CONSTANT CURRENT

Q323, 324 2SC2632 NEW CLASS A DRIVE

Q325, 326 2SA1124 NEW CLASS A DRIVE

Q951, 952 2SA1015 ICQ CONTROL

Q953, 954 2SC1815 ICQ CONTROL

D301～304 MA150

D305, 306, 309, 310 SVDMA26-1

D307, 308, 311, 312 MA162A

D313～316, 323～326 0A90

D327～330 SVDMA26-1

SUP27250B

S7 (LOUDNESS)

S8 (SUBSONIC FILTER)

S9 (OPERATION SELECTOR)

VOLUME CONTROL

(BALANCE)

G ICQ control circuit

H Computer drive ind. circuit

Power amplifier, protection and power supply c

Clock adjusting point

Clock adjustment

Negative voltage (−B) line

60°C(140°F)
100°C(212°F) } Thermal sensor
130°C(266°F)

ICQ adjusting points

29 30 31 32 33 34 35 36 37 38

plifier, protection and power supply circuit

I

Q321, 322 2SD661 AS CONTROL
Q327, 328 2SC2592 NEW CLASS A DRIVE
Q329, 330 2SA1112 NEW CLASS A DRIVE
Q331, 332 SC2774 OWER
Q333, 334 2SA1170 POWER
Q501, 502 2SC1980 CURRENT LIMITER

IC501 SVITA7317P MUTING
Q505, 507 2SA1015 HOLD CIRCUIT
Q503, 504, 506 2SC1815 DC DETECTOR CIRCUIT

IC501 RELAY DRIVE Power DET DC DET

TP501 ICQ adjusting points A B

D502,503 ⊘MA150

C803 25V100
D801, 802 SVDSR1K4
D824 SVDSR1K2

R801 2.2 D801
R802 2.2 D802

C506 0.01

Supply voltage adjustment

Load impedance detection adj. (L ch.)

T801 RED RED GRY ORN WHT YEL BRN BLK
AC 120 AC 10 0 AC 120 AC 110 0

AC39.6V AC47.6V AC39.6V AC47.6V

S14 (VOLTAGE SELECTOR) 100V 110V 120V 220V 240V
C2 0.01
S13 (POWER)
SWITCHED C1 0.01
UNSWITCHED
C5 0.0047 C3 0.0047 F2 250V T4A
C6 0.0047 C4 0.0047 C47 F1 250V T4A
SUP23371C
AC 110/120/220/240V 50/60Hz

Load impedance det. adjusting point (L ch.)

Load impedance det. adjusting point (R ch.)

J Load impedance detection circuit

IC701 AN6552 VOLTAGE COMPARATOR
Q707 2SA774 RELAY DRIVE

NOAMAL ON

TP701 TP702 TP703

R371 2W 330 SUP23391E
HEADPHONES L R E
R372

J22 J21 (MAIN SPEAKER) S11 ON OFF
(REMOTE SPEAKER) S12 ON OFF

MAIN (L ch) REMOTE SPEAKERS MAIN (R ch) REMOTE

SUP23390D

Q701, 703, 704 2SA1015 SWITCHING & MONO MULTI
Q702 2SC1815 SWITCHING
Q705 2SC1980 SWITCHING
Q706 2SC1509 RELAY DRIVE
D701~706 ⊘MA150
D707 SVDMZ422B 22V ZENER
SUP23390C

Q612 2SB536 REGULATOR
Q611 2SD381 REGULATOR
Q609, 610 2SK34 REGULATOR
Q607, 613 2SA722 REFERENCE VOLT
Q606 2SC1509 TRIGGER CONTROL
Q605 2SA921 SWITCHING
Q603, 604, 608 2SC1980 SOFT START CIRCUIT
Q601 2SA774 TRIGGER CONTROL
Q602 2SA1015 INTERGRAPH

TP502 Earth
TP503

D601~604 SVDCR6AM-4 THYRISTOR
D605~608 SVDSR1K4
D609 SVDMZ320B 20V ZENER
D610, 611, 614, 615 ⊘MA150

TP ICQ adjusting points C D
SVDMZ308A1
D618 SVDMZ303B 3V ZENER
D501, 504, 505 612, 613, 616 MA162

D317~320 SVDMA26-1
D321, 322 ⊘MA150
D619 SVDMZ422B 22V ZENER
D620 SVDMZ318A2 18V ZENER

SUP23390B

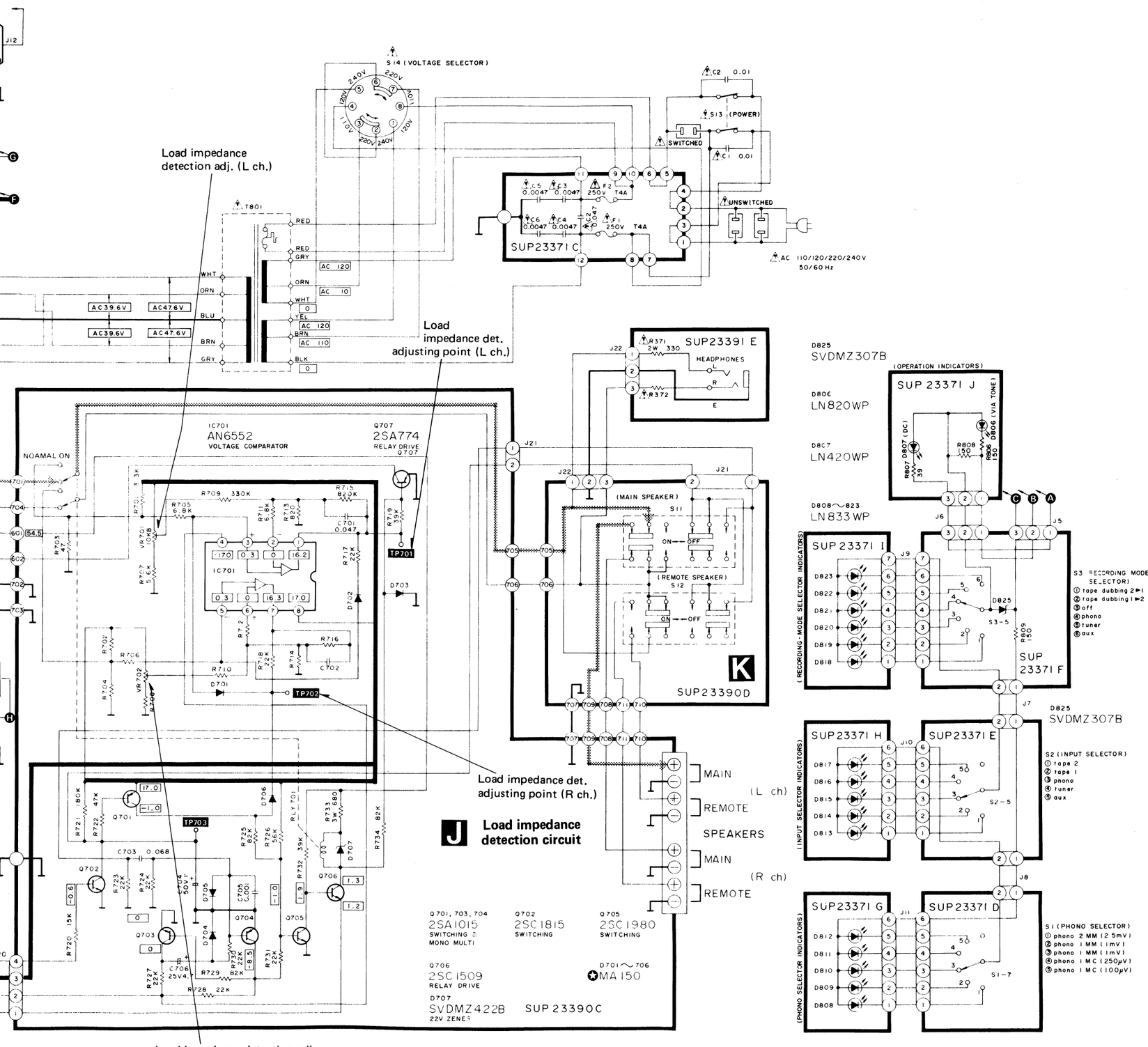
Negative voltage (−B) line

Load impedance detection adj.

D825 SVDMZ307B (OPERATION INDICATORS)
D806 LN820WP
D807 LN420WP
D808~823 LN833WP

SUP23371J (RECORDING - MODE SELECTOR INDICATORS)
SUP23371I (INPUT SELECTOR INDICATORS)
SUP23371H
SUP23371E
SUP23371G (PHONO SELECTOR INDICATORS)
SUP23371D

30 31 32



- **The part No. of transistors, IC and diodes mentioned in the schematic diagram stand for production part No. Regarding the part No. with ✪ mark, the production part No. are different from the replacement part No. Therefore, when placing an order for replacement parts, pleases use the part No. in the replacement parts list.**

Notes:

1. **S1-1 ~S1-7 :** Phono selector switch in **"phono 2.5mV"** position.
   phono 2 MM(2.5mV) ⟷ phono 1MM(1mV) ⟷ phono 1MM(2.5mV) ⟷ phono 1MC(250μV) ⟷ phono 1MC(100μV)
2. **S2-1 ~S2-5 :** Input selector switch in **"phono"** position.
   tape 2 ⟷ tape 1 ⟷ phono ⟷ tuner ⟷ aux/CD/video
3. **S3-1 ~S3-5 :** Recording-mode selector switch in **"phono"** position.
   tape dubbing 2 ▶ 1 ⟷ tape dubbing 1 ▶ 2 ⟷ off ⟷ phono ⟷ tuner ⟷ aux/CD/video
4. **S4** : High-cut filter switch in **"off"** position.
   off ⟷ 7kHz
5. **S5** : Mode selector switch in **"stereo"** position.
   stereo ⟷ mono
6. **S6** : Audio muting switch in **"0 dB"** position.
   0 dB ⟷ −20dB
7. **S7** : Loudness switch in **"off"** position.
   on ⟷ off
8. **S8** : Subsonic filter switch in **"off"** position.
   off ⟷ 20Hz
9. **S9** : Operation selector switch in **"straight DC"** position.
   straight DC ⟷ via tone
10. **S10** : Super bass turnover frequency selector switch in **"150Hz"** position
    150Hz ⟷ 75Hz
11. **S11** : Main apeaker switch in **"on"** position.
12. **S12** : Remote speaker switch in **"off"** position.
13. **S13** : Power switch in **"on"** position.
14. **S14** : Voltage selector switch in **"220V"** position.
    120V ⟷ 110V ⟷ 220V ⟷ 240V
15. Same circuit is used for both L and R channels. For the resistance and capacity of R channel (bottom of circuit diagram), refer to L channel. For the voltage value, refer to R channel.
16. ▭ Indicated voltage values are the standard values for the DC electronic circuit tester (high impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
    * The voltage values in ▭ are those obtained with speaker selector set at **"main"** and load impedance at "8Ω".
    * The parenthesized voltage values are those obtained with speaker selector at **"main"** and load impedance at "4Ω".
17. ⁘⁘⁘ Phono signal lines of left channel.
18. ▬▶ Positive (+B) voltage lines.
19. ▬▪▬▶ Negative (−B) voltage line
20. Important safety notice:
    Components identified by ⚠ mark have special characteristics important for safety.
    When replacing any of these components, use only manufacturer's specified parts.

■ RESISTORS & CAPACITORS

Notes: 1. Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
2. Important safety notice: Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
3. The "**S**" mark is service standard parts and may differ from production parts.
4. The unit of resistance is Ω(ohm), K = 1000Ω, M = 1000kΩ.
5. The unit of capacitance is μF (microfarad). P = 10^{-6} μF
6. Bracketed indications in Ref. No. columns spedify the area. Parts without these indications can be used for all areas.

Resistor Type	Wattage	Tolerance
ERD : Carbon	25 : 1/4W	J : ±5%
ERG : Metal Oxide	1 : 1W	G : ±2%
ERO : Metal Film	2 : 2W	
ERC : Solid	3 : 3W	
	S1 : 1/2W	

Capacitor Type	Voltage		Tolerance
	ECEA Type	Other	
ECEA : Electrolytic	0J : 6.3V	1H : 50V DC	C : ±0.25pF
ECCD : Ceramic	1A : 10V	KC : 400V AC	D : ±0.5pF
ECKD : Ceramic	1C : 16V	2H : 500V DC	M : ±20%
ECQM : Polyester	1E : 25V	2A : 250V AC	J : ±5%
ECET : Electrolytic	1H : 50V	1 : 50V DC	K : ±10%
ECEA...N : Non Polar Electrolytic	1J : 63V		Z : +80%, −20%
ECQE : Polyester	50 : 50V		P : +100%, −0%
ECQU : Metalized Polyester	25 : 25V		
ECQP : Polypropylene	2A : 100V		
ECQS : Polystyrene			

RESISTERS

Ref. No.	Part No.	Value
R101,102 Ⓢ	ERD25FJ150	15
R103,104 Ⓢ	ERD25TJ473	47K
R105,106 Ⓢ	ERD25FJ221	220
R107,108 Ⓢ	ERD25FJ101	100
R109,110 Ⓢ	ERD25TJ683	68K
R111,112 Ⓢ	ERD25TJ223	22K
R113,114	ER025CKF2201	2.2K
R115,116	ER025CKF2201	2.2K
R117,118 Ⓢ	ERD25TJ104	100K
R119,120 Ⓢ	ERD25FJ101	100
R121,122 Ⓢ	ERD25FJ181	180
R123,124 Ⓢ	ERD25TJ123	12K
R125,126	ER025CKF2701	2.7K
R127,128 Ⓢ	ERD25FJ102	1K
R129,130 Ⓢ	ERD25FJ820	82
R131,132	ER025CKF1200	1.2K
R133,134	ER025CKF3R0	13
R135,136 Ⓢ	ERD25FJ4R7	4.7
R137,138	ER025CKF6802	68K
R139,140	ER025CKF5601	5.6K
R141,142 Ⓢ	ERD25FJ121	120
R143,144 Ⓢ	ERD25FJ561	560
R145,146 Ⓢ	ERD25TJ334	330K
R201,202 Ⓢ	ERD25TJ824	820K
R203,204 Ⓢ	ERD25TJ824	820K
R205,206 Ⓢ	ERD25TJ824	820K
R207,208 Ⓢ	ERD25TJ824	820K
R209,210 Ⓢ	ERD25FJ392	3.9K
R211,212 Ⓢ	ERD25TJ824	820K
R213,214 Ⓢ	ERD25FJ392	3.9K
R215,216 Ⓢ	ERD25TJ333	33K
R217,218 Ⓢ	ERD25FJ392	3.9K
R219,220 Ⓢ	ERD25TJ183	18K
R221,222 Ⓢ	ERD25TJ124	120K
R223,224 Ⓢ	ERD25TJ224	220K
R225,226 Ⓢ	ERD25FJ102	1K
R303,304 Ⓢ	ERD25FJ102	1K
R305,306 Ⓢ⚠	ERD25FJ101	100
R307,308 Ⓢ	ERD25FJ562	5.6K
R309,310 Ⓢ	ERD25FJ562	5.6K
R311,312 Ⓢ	ERD25TJ183	18K
R313,314 Ⓢ	ERD25FJ391	390
R315,316 Ⓢ	ERD25FJ822	8.2K
R317,318 Ⓢ	ERD25FJ103	10K
R319,320 Ⓢ⚠	ERD25FJ182	1.8K
R321,322 Ⓢ⚠	ERD25FJ221	220
R323,324 Ⓢ⚠	ERD25FJ221	220
R325,326 Ⓢ	ERD25TJ153	15K
R327,328 Ⓢ	ERD25FJ272	2.7K
R329,330 Ⓢ⚠	ERD25FJ221	220
R331,332 Ⓢ⚠	ERD25FJ221	220
R335,336 Ⓢ⚠	ERD25FJ182	1.8K
R337,338 Ⓢ⚠	ERD25FJ122	1.2K
R339,340 Ⓢ⚠	ERD25FJ122	1.2K
R341,342 ⚠	ERD2FCG101	100
R343,344 ⚠	ERD2FCG101	100
R345,346 Ⓢ	ERD25FJ682	6.8K
R347,348 Ⓢ⚠	ERD25FJ821	820
R349,350 Ⓢ⚠	ERD25FJ102	1K
R351,352 Ⓢ	ERD25TJ333	33K
R353,354 Ⓢ	ERD25TJ823	82K
R355,356 ⚠	ERD2FCG390	39
R357,358 ⚠	ERD2FCG390	39
R359,360 Ⓢ	ERD25TJ274	270K
R361,362 Ⓢ	ERD25TJ274	270K
R363,364	ERD2FCG221	220
R365,366 Ⓢ	ERD25FJ470	47
R367,368 Ⓢ⚠	ERD25FJ100	10
R369,370	ERG2ANJ150	15
R371,372	ERG2ANJ331	330
R373,374 Ⓢ	ERD25FJ103	10K
R375,376 Ⓢ	ERD25TJ104	100K
R377,378 Ⓢ	ERD25TJ104	100K
R379,380 Ⓢ	ERD25TJ333	33K
R381,382 Ⓢ	ERD25FJ102	1K
R383,384 Ⓢ	ERD25TJ154	150K
R385,386 Ⓢ	ERD25TJ333	33K
R401,402 Ⓢ	ERD25FJ102	1K
R403,404	ER025CKF4302	43K
R405,406 Ⓢ	ERD25FJ272	2.7K
R407,408 Ⓢ	ERD25TJ224	220K
R409,410 Ⓢ	ERD25TJ104	100K
R411,412	ERC14GK825	82M
R413,414	ERC14GK825	82M
R415,416 Ⓢ	ERD25TJ224	220K
R417,418 Ⓢ	ERD25TJ393	39K
R419,420 Ⓢ	ERD25TJ223	22K
R421,422 Ⓢ	ERD25TJ184	180K
R423,424 Ⓢ	ERD25TJ563	56K
R425,426 Ⓢ	ERD25FJ472	4.7K
R427,428 Ⓢ	ERD25FJ272	2.7K
R429,430 Ⓢ	ERD25FJ102	1K
R431,432 Ⓢ	ERD25TJ223	22K
R433,434 Ⓢ	ERD25FJ472	4.7K
R501,502 Ⓢ	ERD25TJ683	68K
R503 Ⓢ	ERD25TJ823	82K
R504 Ⓢ	ERD25FJ822	8.2K
R505 Ⓢ	ERD25TJ123	12K
R506 Ⓢ	ERD25FJ102	1K
R507 Ⓢ	ERD25TJ333	33K
R508 Ⓢ	ERD25TJ153	15K
R509 Ⓢ	ERD25FJ102	1K
R510 Ⓢ	ERD25FJ562	5.6K
R511 Ⓢ	ERD25FJ222	2.2K
R512 Ⓢ	ERD25TJ224	220K
R513 Ⓢ	ERD25FJ822	8.2K
R514,515 Ⓢ	ERD25FJ102	1K
R516 Ⓢ	ERD25FJ682	6.8K
R517,518 Ⓢ	ERD25FJ391	390
R519,520 Ⓢ	ERD25FJ222	2.2K
R601 Ⓢ	ERD25FJ562	5.6K
R602,603 Ⓢ⚠	ERD25FJ4R7	4.7
R604 Ⓢ	ERD25FJ682	6.8K
R605 Ⓢ	ERD25TJ333	33K
R606 Ⓢ	ERD25TJ223	22K
R607 Ⓢ	ERD25FJ222	2.2K
R608 Ⓢ	ERD25FJ101	100
R609 Ⓢ	ERD25FJ222	2.2K
R610 Ⓢ	ERD25FJ332	3.3K
R611 Ⓢ	ERD25FJ100	10
R612 Ⓢ	ERD25TJ104	100K
R613 Ⓢ	ERD25TJ183	18K
R614 Ⓢ	ERD25FJ562	5.6K
R615 Ⓢ	ERD25TJ563	56K
R616 Ⓢ	ERD25FJ102	1K
R617 Ⓢ	ERD25TJ393	39K
R618 Ⓢ	ERD25FJ822	8.2K
R619	ER025CKF1802	18K
R620	ER025CKF3901	3.9K
R621	ER025CKF2702	27K
R622 Ⓢ	ERD25TJ393	39K
R623	ER025CKF2202	22K
R624 Ⓢ	ERD25FJ103	10K
R625 Ⓢ	ERD25TJ184	180K
R626	ERG3ANJ681	680
R627,628 ⚠	ERD2FCG121	120
R629	ER025CKF2152	21.5K
R630	ER025CKF2002	20K
R631	ER025CKF3902	39K
R632 Ⓢ	ERD25FJ222	2.2K
R701,702 Ⓢ	ERD25FJ332	3.3K
R703,704 Ⓢ	ERD25FJ470	47
R705,706 Ⓢ	ERD25FJ682	6.8K
R707,708 Ⓢ	ERD25FJ562	5.6K
R709,710 Ⓢ	ERD25TJ334	330K
R711,712 Ⓢ	ERD25FJ682	6.8K
R713,714 Ⓢ	ERD25FJ821	820
R715,716 Ⓢ	ERD25TJ824	820K
R717,718 Ⓢ	ERD25TJ223	22K
R719	ERD25TJ393	39K
R720 Ⓢ	ERD25TJ153	15K
R721 Ⓢ	ERD25TJ184	180K
R722 Ⓢ	ERD25TJ473	47K
R723,724 Ⓢ	ERD25TJ223	22K
R725 Ⓢ	ERD25TJ823	82K
R726 Ⓢ	ERD25TJ563	56K
R727,728 Ⓢ	ERD25TJ223	22K
R729 Ⓢ	ERD25TJ823	82K
R730,731 Ⓢ	ERD25TJ223	22K
R732 Ⓢ	ERD25TJ393	39K
R733	ERG3ANJ681	680
R734 Ⓢ	ERD25TJ823	82K
R801,802 ⚠	ERD25FAJ2R2	2.2
R803	ERG3ANJ561	560
R806 Ⓢ	ERD25FJ151	150
R807 Ⓢ	ERD25FJ390	39
R808,809 Ⓢ	ERD25FJ151	150
R901,902 Ⓢ	ERD25FJ562	5.6K
R903 Ⓢ	ERD25FJ391	390
R904,905 Ⓢ	ERD25FJ472	4.7K
R906 Ⓢ	ERD25FJ472	4.7K
R909,910 Ⓢ	ERD25TJ333	33K
R911,912 Ⓢ	ERD25TJ333	33K
R913,914 Ⓢ	ERD25TJ123	12K
R915,916 Ⓢ	ERD25TJ183	18K
R917,918 Ⓢ	ERD25TJ104	100K
R919,920 Ⓢ	ERD25TJ333	33K
R921,922 Ⓢ	ERD25TJ333	33K
R923,924 Ⓢ	ERD25TJ183	18K
R925,926 Ⓢ	ERD25TJ183	18K
R927,928 Ⓢ	ERD25FJ562	5.6K
R929,930 Ⓢ	ERD25FJ103	10K
R931,932 Ⓢ	ERD25FJ103	10K
R933 Ⓢ	ERD25TJ824	820K
R934,935 Ⓢ	ERD25FJ103	10K
R936 Ⓢ	ERD25TJ123	12K
R937 Ⓢ	ERD25FJ562	5.6K
R938 Ⓢ	ERD25FJ222	2.2K
R939 Ⓢ	ERD25TJ183	18K
R940 ⚠	ERDS1FJ182	1.8K
R941 Ⓢ	ERD25TJ473	47K
R942,943 Ⓢ	ERD25TJ333	33K
R944 Ⓢ	ERD25TJ333	33K
R945	ERD25FAJ2R2	2.2
R946 Ⓢ	ERD25FJ102	1K
R951,952 Ⓢ	ERD25FJ103	10K
R953,954 Ⓢ	ERD25FJ103	10K
R955,956 Ⓢ	ERD25FJ272	2.7K
R957,958 Ⓢ	ERD25FJ103	10K
R959,960 Ⓢ	ERD25FJ272	2.7K
R961,962 Ⓢ	ERD25FJ103	10K

CAPACITORS

Ref. No.	Part No.	Value
C2	ECQE2A473MW	0.047
C3,4	ECKDKC472MF	0.0047
C5,6	ECKDKC472MF	0.0047
C101,102 Ⓢ	ECCD1H820K	82P
C103,104 Ⓢ	ECKD1H472MB	0.0047
C105,106 Ⓢ	ECKD1H103ZF	0.01
C107,108	ECQM1H152KV	0.0015
C109,110 Ⓢ	ECKD1H102ZF	0.001
C111,112	ECQP1473GZ	0.014
C113,114	ECQP1103GZ	0.011
C115,116 Ⓢ	ECQM1H332JZ	0.0033
C117,118 Ⓢ⚠	ECEA1EN3R3S	3.3
C119,120 Ⓢ	ECQM1H472JZ	0.0047
C121,122 Ⓢ	ECEA0JS222	2200
C123,124 Ⓢ	ECEA1ES470	47
C125,126 Ⓢ	ECKD1H103ZF	0.01
C201,202 Ⓢ	ECQM1H472JZ	0.0047
C203,204 Ⓢ	ECQM1H153JZ	0.015
C205,206	ECQM1H683KV	0.068
C207,208 Ⓢ	ECQM1H333JZ	0.033
C209,210 Ⓢ	ECCD1H181K	180P
C301,302 Ⓢ	ECCD1H121K	120P
C303,304 Ⓢ	ECEA50Z1	1
C305,306	ECCD2H120K	12P
C307,308 Ⓢ	ECCD2H030D	3P
C309,310	ECCD2H120K	12P
C311,312	ECCD2H030C	3P
C313,314 Ⓢ	ECKD1H681KB	680P
C315,316 Ⓢ	ECKD1H681KB	680P
C317,318 Ⓢ	ECKD1H473ZF	0.047
C319,320 Ⓢ	ECEA1HS100	10
C321,322 ⚠	ECEA1EN4R7S	4.7
C323,324 Ⓢ	ECKD1H221KB	220P
C325,326	ECQM1H223KV	0.022
C327,328 Ⓢ	ECCD2H151K	150P
C329,330 Ⓢ	ECEA1JS100	10
C331,332 Ⓢ	ECEA1JS100	10
C333,334 Ⓢ	ECKD1H221KB	220P
C335,336 Ⓢ	ECCD2H030D	3P
C337,338 Ⓢ	ECKD1H473ZF	0.047
C401,402 ⚠	ECEA1CN470S	47
C403,404	ECQM1H153KV	0.015
C405,406	ECQM1H153KV	0.015
C407,408	ECQM1H152JZ	0.0015
C409,410	ECQM1H152JZ	0.0015
C411,412	ECQM1H153KV	0.015
C413,414	ECQM1H683KV	0.068
C415,416	ECQM1H392JZ	0.0039
C417,418	ECCD1H121K	120P
C419,420	ECQS1821JZ	820P
C421,422	ECQM1H223KV	0.022
C423,424 Ⓢ	ECEA50Z4R7	4.7
C501 Ⓢ	ECKD1H102ZF	0.001
C502 Ⓢ	ECEA50Z3R3	3.3
C503 Ⓢ⚠	ECEA1CN101S	100
C504 Ⓢ	ECEA50Z1	1
C505,506 Ⓢ	ECKD1H103ZF	0.01
C601 Ⓢ	ECEA50ZR47	0.47
C602 Ⓢ	ECEA1JS4R7	4.7
C603 Ⓢ	ECEA50Z3R3	3.3
C604 Ⓢ	ECEA50ZR47	0.47
C605 Ⓢ	ECEA50Z1	1
C606,607	ECET56V183Z	18000
C608,609 Ⓢ	ECEA1VS330	33
C610,611 Ⓢ	ECEA1ES101	100
C612,613 Ⓢ	ECKD1H223ZF	0.022
C614 Ⓢ	ECKD1H223ZF	0.022
C616 Ⓢ	ECEA50ZR47	0.47
C620,621	ECKD2H103ZFM	0.01
C701,702	ECQM1H473KV	0.047
C703	ECQM1H683KV	0.068
C704 Ⓢ	ECEA50Z1	1
C705 Ⓢ	ECKD1H102ZF	0.001
C706 Ⓢ	ECEA25Z4R7	4.7
C803 Ⓢ	ECEA1ES101	100
C901 Ⓢ	ECEA1HS100	10
C902 Ⓢ	ECEA1AS101	100
C903 Ⓢ	ECKD1H102ZF	0.001
C905,906 Ⓢ	ECEA50Z3R3	3.3
C907 Ⓢ	ECEA1AS101	100
C908 Ⓢ	ECEA1HS100	10
C909 Ⓢ	ECCD1H271K	270P
C910 Ⓢ	ECKD1H103ZF	0.01
C911,912 Ⓢ	ECEA1HS100	10
C913 Ⓢ	ECKD1H103ZF	0.01
C914	ECEA1JU471	470
C951,952 Ⓢ	ECKD1H103ZF	0.01
C953,954 Ⓢ	ECKD1H103ZF	0.01
C955	ECKDKC103PF2	0.01

■ REPLACEMENT PARTS LIST

Notes: 1. Part numbers are indicated on most mechanical parts. Please use this part number for parts order.
2. Important safety notice: Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
3. Ⓚ —marked parts are used for black only, while ○ —marked parts are for silver type only.
4. Part other than Ⓚ — and ○—marked are used for both black and silver type.
5. Bracketed indications in Ref. No. columns specify the area. Parts without these indications can be used for all areas.
6. The Ⓢ mark is service standard parts and may differ from production parts.
7. The parenthesized numbers in the column of description stand for the quantity per set.

Black type model No. : SU-V909(K)

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description
IC101	SVINJ4559DSM	Equalizer
IC301,701,401	AN6552F	DC Servo, Voltage Comparator
IC501	SVITA7317P	Muting
IC901	MN1421STA	Ico Controller
IC902,903	SVITD62501P	Inverter

TRANSISTORS

Ref. No.	Part No.	Part Name & Description
Q101～108, 301～304	2SK170－GR	Differential Amp.
Q109,110,505, 507,602,701, 703,704	2SA1015－Y	Liner Feedback, Hold Circuit, Integraph, Switching and Mono Multi
Q111,112	2SA721－T	Current Mirror
Q113～116,503, 504,506,702	2SC1815－Y	Cascade, DC Detector Circuit and Switching
Q309～312,501, 502,603,604, 608,705	2SC1980－T	Pre drive, Current Limiter, Soft Start Circuit and Switching
Q313～316,605	2SA921－T	Pre Drive and Switching
Q317,318	2SA1123－R	Constant Current
Q319,320	2SC2631－R	Constant Current
Q321,322	2SD661－S	Bias Control
Q323,324	2SC2632－R	New Class A Drive
Q325,326	2SA1124－R	New Class A Drive
Q327,328	2SC2592－R	New Class A Drive
Q329,330	2SA1112－R	New Class A Drive
Q331,332	2SC2774－Y	Power
Q333,334	2SA1170－Y	Power
Q601,707	2SA777NC－R	Trigger Control and Relay Drive
Q606,706 Ⓢ	2SC1509F－R	Trigger Control and Relay Drive
Q607,613 Ⓢ	2SA722－S	Reference Voltage
Q609,610	2SK34－D1	Regulator
Q611	2SD381－L	Regulator
Q612 Ⓢ	2SB536－L	Regulator
Q901,902,905, 907,909～911, 953,954	2SC1815－Y	Icq Control, Regulator and Switching
Q903,904,951,952	2SA1015－Y	Switching and Icq Control
Q906 Ⓢ	2SC1567－Q	Regulator
Q908	2SA777NC－R	Switching

DIODES

Ref. No.	Part No.	Part Name & Description
D317～320 Ⓢ	MA27W－A	Bias
D103,104, 301～304,321, 322,502,503, 610,611,614, 615,701～706, 904～906,910, 912～914	MA162A	Switching
D313～316, 323～326,923 Ⓢ	20A90	Bias
D101,102,105, 106,305,306, 309,310,327, 328,329,330 Ⓢ	MA27A1	Bias
D307,308,311,312 Ⓢ	MA162A	Switching
D501,504,505, 612,613,616 Ⓢ	MA162A	Switching
D601～604	SVDCR6AM－4	Diode, Thyristor
D605～608, 801,802 ⚠	SVDSR1K4	Rectifier
D609	SVDMZ320B	20V Zener
D617	SVDMZ308A1	8V Zener
D618	SVDMZ303BM	3V Zener
D619,707	SVDMZ422B	22V Zener
D620	SVDMZ318A2	18V Zener
D621	SVTTT202－50	Thyristor
D806	LN820WP	LED(Orange)
D807	LN420WP	LED(Yellow)
D808～823	LN833WP	LED(Orange)
D824 ⚠	SVDSR1K2	Rectifire
D825	SVDMZ307B	7V Zener
D901	SVDMZ305C	5V Zener
D902,903 Ⓢ	MA162A	Switching
D907	SVDMZ306B2	6V Zener
D908	SVDMZ322A2	22V Zener
D909	SVDMZ410C1	10V Zener
D911	SVDMZ324B	24V Zener
D915～921	SVDAY5533K－M	LED, Pre Heat, Mid, Low, High Ind.
D919	SVDBG5533K－1	LED, Auto Ind.
D922	SVDSR1K2	Rectifier

COILS and TRANSFORMER

Ref. No.	Part No.	Part Name & Description
L101～104 Ⓢ	RLQY75S2	Choke
L301,302	SLQY15G－30	Choke
T801 ⚠	SLT5S57	Power Source

VARIABLE RESISTORS

Ref. No.	Part No.	Part Name & Description
VR201	EWGGCA067375	Balance, 100kΩ (BH)
VR202	EWFNUA041B15	Main, 10kΩ(B)
VR301,302 Ⓢ	EVNM0AA00B52	ICQ Adj, 500Ω(B)
VR401	EWKKMA06553X	Super Bass, 5kΩ
VR402	EWGJCY067530	Bass, 100kΩ(C)
VR403	EWGJC0067C15	Treble, 100kΩ(C)
VR601 Ⓢ	EVNM4AA00B53	Voltage Adj, 5kΩ (B)
VR701,702	EVNK6AA00B14	Load Detector, 10 kΩ(B)
VR901 Ⓢ	EVNM0AA00B53	Clock Adj, 5kΩ(B)

THERMISTERS

Ref. No.	Part No.	Part Name & Description
TH301,302	ERTD2ZHL103S	10kΩ
TH303,304	ERTD2ZHL332S	3.3kΩ

LAMP

Ref. No.	Part No.	Part Name & Description
PL901～903 ⚠	XAMR74S17	New Class A, 12V, 0.055A

FUSES

Ref. No.	Part No.	Part Name & Description
F1,2 ⚠	XBA2C40TR0	250V, T4A

COMPONENT COMBINATIONS

Ref. No.	Part No.	Part Name & Description
Z301,302 Z901 Z902	ERF3GBKR22N EXBP87562K SXRPTH517F03	3W, 0.22Ω(×2) 5.6kΩ(×7) Temperature Det. (60°C, 100°C, 130°C)

SWITCHES

Ref. No.	Part No.	Part Name & Description
S1	ESA26523	Phono Selector
S2,3	ESA2682	Input, Rec Selector
S4,5,7,8	SSH461	High Filter, Mode, Loudness and Subsonic Filter
S6	SSH1021	
S9	SSH1037	
S10	SSH159	
S11,12	SSH2027－2	
S13 ⚠	ESB90227S	
S14 ⚠	ESE37200	

RELAYS

Ref. No.	Part No.
RLY601	SSY103－1
RLY701	SSY99－1

CABINET and CHASSIS PA

Ref. No.	Part No.	Fro
1 ○ [PA, PE]	SGWUV909-SE	
1 ○ [XA, PC]	SGWUV909-SX	Fro
1 Ⓚ [K－PC]	SGWUV909-KC	Fro (Bl
1－1	SHG6063－1	Spa Ass
2	SUE25－1	Ho
3	SUB59	Gea
4	SUB65	Gea
5	SUB63	Gea
6 ○	SUB53－2	Hin
6 Ⓚ	SUB53	Hin
7	SUW1849	Bra Ass
8	SHR9575	Spa
9	SGU247	Tin
10	SHG6131	Spa
11	SBN1151	Kn
12 ○	SGX915	Orn
12 Ⓚ	SGX915－1	Orn
13 ○	SUB51－2	Hin Lev
13 Ⓚ	SUB51	Hin Lev
14	SUE23－1	Ho Lev
15	SUB57	Op Tin
16	SUB55	Op Tin
17	SUS223	Spr Lev
18	SJT347	Cri
19	SUW2081	Bra
20	SUW2079	Bra
21	SHG6129	Spa
22	SBC421	But
23	SBN1149	Kn
24	SBC339	But Spe
25	SBN1071	Kn Bas
26	SHP9337	Spa
27	SDH545	Ref
28	SHG6127－2	Cus
29	SHP9299	Spa
30	SBC409	But
31	SHG6199	Cus
32	ESA3398B	Ren Pho
33	ESA3397B	Ren Inp
34	ESA3396B	Ren Rec
35	SBC337－1	But
36	XCJ6P21B－A1	Jac
37	SUW1847	Bra Jac
38 ○	SKC850S1	Cab
38 Ⓚ	SKC850B1	Cab
39	SML107－3	Bra Tra
40	SMC947	Shi
41	SUW1851－1	Bra
42	SUW1857	Bra
43	SUW1851	Bra

Part No.	Value
S	
ECQM1H473KV	0.047
ECQM1H683KV	0.068
ECEA50Z1	1
ECKD1H102ZF	0.001
ECEA25Z4R7	4.7
ECEA1ES101	100
ECEA1HS100	10
ECEA1AS101	100
ECKD1H102ZF	0.001
ECEA50Z3R3	3.3
ECEA1AS101	100
ECEA1HS100	10
ECCD1H271K	270P
ECKD1H103ZF	0.01
ECEA1HS100	10
ECKD1H103ZF	0.01
ECEA1JU471	470
ECKD1H103ZF	0.01
ECKD1H103ZF	0.01
ECKDKC103PF2	0.01

eas.

No. : SU-V909(K)

	Part Name & Description
1	LED, Auto Ind. Rectifier
R	
	Choke
	Choke
	Power Source
	Balance, 100kΩ (BH)
5	Main, 10kΩ(B)
2	ICQ Adj, 500Ω(B)
K	Super Bass, 5kΩ
	Bass, 100kΩ(C)
	Treble, 100kΩ(C)
3	Voltage Adj, 5kΩ (B)
	Load Detector, 10 kΩ(B)
3	Clock Adj, 5kΩ(B)
	10kΩ
	3.3kΩ
	New Class A, 12V, 0.055A
	250V, T4A
ONS	
	3W, 0.22Ω(×2)
	5.6kΩ(×7)
	Temperature Det. (60°C, 100°C, 130°C)
	Phono Selector Input, Rec Selector High Filter, Mode, Loudness and Subsonic Filter

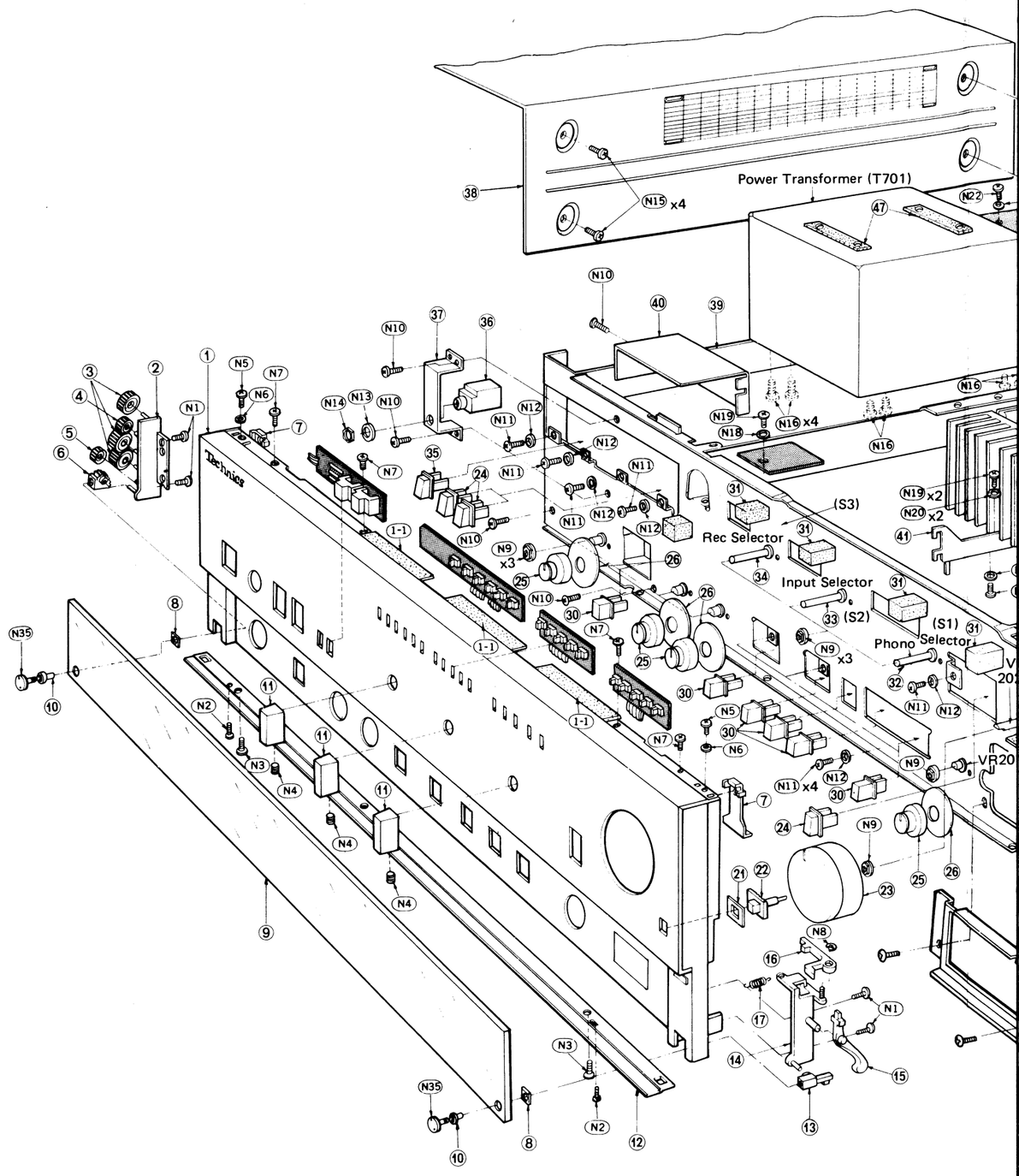
Ref. No.	Part No.	Part Name & Description
S6	SSH1021	Muting
S9	SSH1037	Operation
S10	SSH159	Turn Over
S11,12	SSH2027−2	Speaker
S13 ⚠	ESB90227S	Power Source
S14 ⚠	ESE37200	Voltage Selector
RELAYS		
RLY601	SSY103−1	Tap Select
RLY701	SSY99−1	Speaker Protection

Ref. No.	Part No.	Description & Pcs.
CABINET and CHASSIS PARTS		
1 ○ [PA, PE]	SGWUV909−SE	Front Panel Ass'y (1)
1 ○ [XA, PC]	SGWUV909−SX	Front Panel Ass'y (1)
1 Ⓚ [K−PC]	SGWUV909−KC	Front Panel Ass'y (Black) (1)
1−1	SHG6063−1	Spacer, Front Panel Ass'y (2)
2	SUE25−1	Holder, Gear (1)
3	SUB59	Gear (3)
4	SUB65	Gear (1)
5	SUB63	Gear (1)
6 ○	SUB53−2	Hinge, Tinted Class (1)
6 Ⓚ	SUB53	Hinge, Tinted Class (1)
7	SUW1849	Bracket, Front Panel Ass'y (2)
8	SHR9575	Spacer, Tinted Class (2)
9	SGU247	Tinted Class (1)
10	SHG6131	Spacer, Latch (2)
11	SBN1151	Knob, Selector Switch (3)
12 ○	SGX915	Ornament, Bottom (1)
12 Ⓚ	SGX915−1	Ornament, Bottom (1)
13 ○	SUB51−2	Hinge, Operation Lever (1)
13 Ⓚ	SUB51	Hinge, Operation Lever (1)
14	SUE23−1	Holder, Operation Lever (1)
15	SUB57	Operation Lever, Tinted Class (1)
16	SUB55	Operation Lever, Tinted Class (1)
17	SUS223	Spring, Operation Lever (1)
18	SJT347	Crip, Fuse (3)
19	SUW2081	Bracket (1)
20	SUW2079	Bracket (1)
21	SHG6129	Spacer, Button (1)
22	SBC421	Button, Operation (1)
23	SBN1149	Knob, Volume (1)
24	SBC339	Button, Muting, Speaker Selector (3)
25	SBN1071	Knob, Super Bass, Bass, Treble, Blance (4)
26	SHP9337	Spacer, Knob (4)
27	SDH545	Reflector Plate (1)
28	SHG6127−2	Cushion Rubber (1)
29	SHP9299	Spacer, Volume Knob (1)
30	SBC409	Button, Push Switch (6)
31	SHG6199	Cushion Rubber (5)
32	ESA3398B	Remote Control, Phono Selector (S1) (1)
33	ESA3397B	Remote Control, Input Selector (S2) (1)
34	ESA3396B	Remote Control, Rec Selector (S3) (1)
35	SBC337−1	Button, Power (1)
36	XCJ6P21B−A1	Jack, Headphone (1)
37	SUW1847	Bracket, Headphone Jack (1)
38 ○	SKC850S1	Cabinet Cover (1)
38 Ⓚ	SKC850B1	Cabinet Cover (Black) (1)
39	SML107−3	Bracket, Power Transformer (1)
40	SMC947	Shield Cover (1)
41	SUW1851−1	Bracket, Heat Sink (1)
42	SUW1857	Bracket, Heat Sink (1)
43	SUW1851	Bracket, Heat Sink (1)

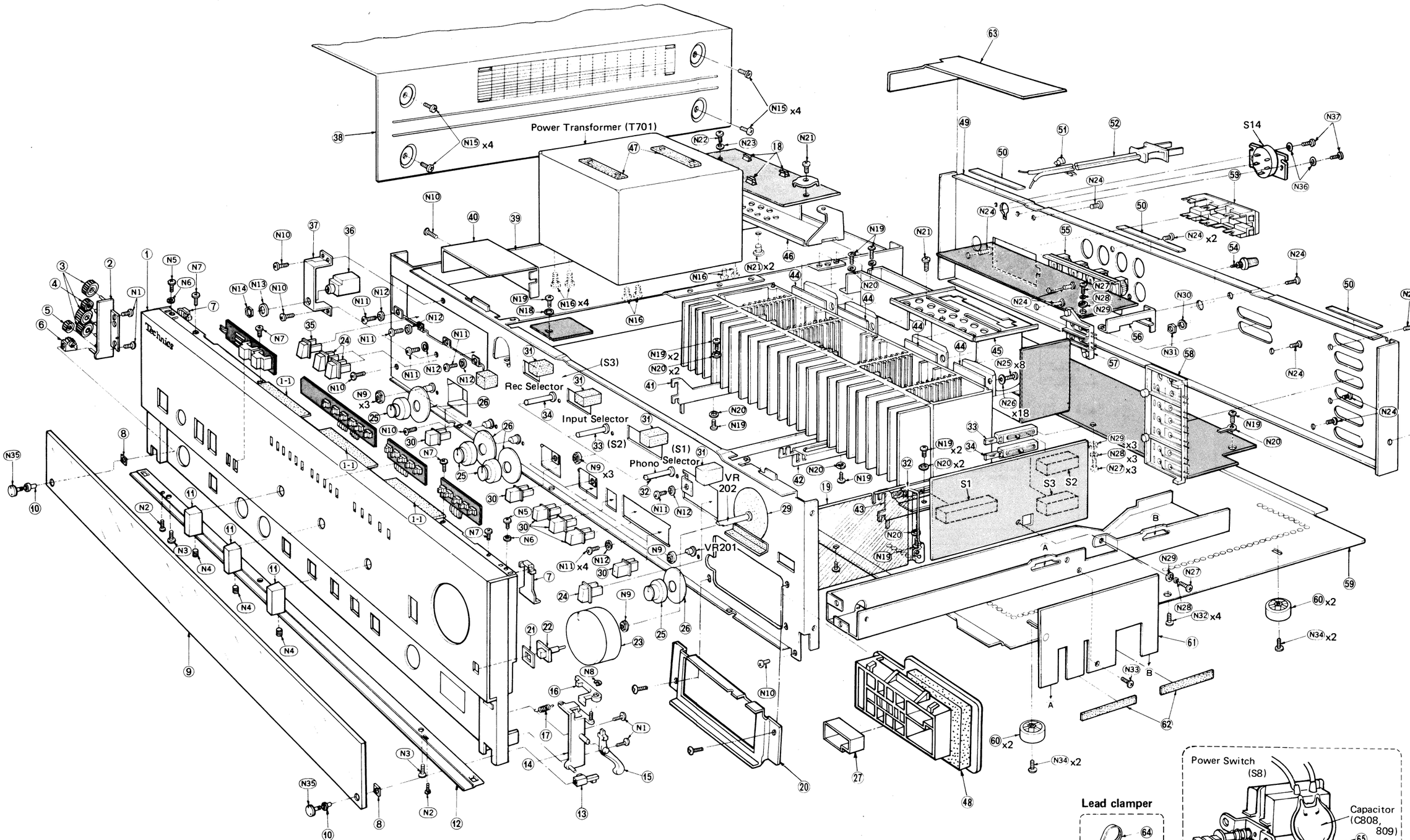
Ref. No.	Part No.	Description & Pcs.
44	SMX513	Spacer, Transistor (4)
45	SUW1855	Bracket, Electrolytic Capacitor (1)
46	SUW1975	Bracket, PCB Holder (1)
47	SHG6087−1	Rubber, Power Transformer (2)
48	SHG6343	Spacer (1)
49	SGP2850−7A	Rear Panel (1)
50	SMX387	Spacer, Rear Panel (2)
51	SHR127	Bushing, AC Cord (1)
52 ⚠ [PA, PE]	RJA52Z	AC Cord (1)
52 ⚠ [XA, PC]	SJA111	AC Cord (1)
53 ⚠	SJS601−2	Socket, AC Outlet (1)
54	SJF4101	Terminal, GND (1)
55	SJF4813−2	Terminal Board, Speaker (1)
56	SUW1853	Bracket, PCB Holder (1)
57	SJF3431−6SA	Terminal Board, Input (Phono) (1)
58	SJF3049−2N	Terminal Board, Input and Output (1)
59	SKU8990−1	Bottom Board (1)
60	SKL227−2	Foot (4)
61	SMC939−2	Shield Plate (1)
62	SHG6229	Rubber, Right Side (2)
63	SMX507	Insulation Sheet (1)
64	SHR301	Lead Clamper (10)
65	SMX685	Cover (2)
SCREWS, NUTS and WASHERS		
N1 S	XTB3+5BFZ	Screw, Tapping ⊕ 3x5 (4)
N2 S	XTB3+8BFN	Screw, Tapping ⊕ 3x8 (2)
N3 S	XTB3+8BFZ	Screw, Tapping with Detent ⊕ 3x8 (2)
N4	XXE4D5FZ	Screw, Knob (Selector Switch) (4)
N5 S	XSN3+6S	Screw, ⊕ 3x6 (2)
N6 S	XWA3B	Washer, Spring φ3 (2)
N7 S	XTB3+8BFZ	Screw, Tapping ⊕ 3x8 (4)
N8	XUC3FT	Circlip, φ3 (1)
N9	SNE4021	Nut, (Volume and Switch) (8)
N10 S	XTB3+8BFZ	Screw, Tapping with Detent ⊕ 3x8 (7)
N11 S	XSN3+6S	Screw, ⊕ 3x6 (9)
N12 S	XWA3B	Washer, Spring φ3 (9)
N13	SNE59−1	Washer, Wave (1)
N14 S	XNS12	Nut, φ12 (1)
N15 S ○	XTB4+8BFN	Screw, Tapping ⊕ 4x8 (8)
N15 S Ⓚ	XTB4+8BFZ	Screw, Tapping ⊕ 4x8 (8)
N16 S	XTB4+10BFN	Screw, Tapping ⊕ 4x10 (8)
N17 S	XTN3+10B	Screw, Tapping ⊕ 3x10 (1)
N18 S	XWG3	Washer, Plain φ3 (1)
N19 S	XTN3+10BFZ	Screw, Tapping ⊕ 3x10 (13)
N20 S	XWG3FZ	Washer, Plain φ3 (13)
N21 S	XTB3+8BFZ	Screw, Tapping with Detent + 3x8 (4)
N22 S	XTN3+10B	Screw, Tapping ⊕ 3x10 (1)
N23 S	XWG3	Washer, Plain φ3 (1)
N24 S	XTB3+8BFZ	Screw, Tapping ⊕ 3x8 (13)
N25 S	XTN3+12BFZ	Screw, Tapping ⊕ 3x12 (8)
N26 S	XWG3FZ	Washer, Plain φ3 (8)
N27 S	XSN3+10BNS	Screw, ⊕ 3x10 (5)
N28 S	XWA3BFN	Washer, Spring φ3 (5)
N29 S	XWG3FN	Washer, Plain φ3 (5)
N30 S	XWC6B	Washer, External Toothed Lock φ6 (1)
N31 S	XNG6E	Nut, φ6 (1)
N32 S	XTB3+10BFZ	Screw, Tapping ⊕ 3x10 (4)
N33 S	XTB3+8BFZ	Screw, Tapping ⊕ 3x8 (1)

Ref. No.	Part No.	Description & Pcs.
N34 S	XTB3+12BFZ	Screw, Tapping ⊕ 3x12 (4)
N35 ○	SNE2083−1	Screw, Tinted Class (2)
N35 Ⓚ	SNE2083	Screw, Tinted Class (2)
N36 S	XWA3BFZ	Washer, Spring φ3 (2)
N37 S	XSN3+6BVS	Screw, ⊕ 3x6 (2)
ACCESSORIES		
A1 [XA, ⚠ PC] only	SJP5213−1	Plug Adaptor, AC Power (1)
A2 [XA ⚠ PC] only	SJP5215	Plug Adaptor, AC Power (1)
A3 [PA, PE]	SQF11753	Instruction Book, Printed Matter (1)
A3 [XA, PC]	SQF11755	Instruction Book, Printed Matter (1)
PACKING PARTS		
P1 ○	SPP701	Polyethylene Bag (1)
P1 Ⓚ	SPP689	Polyethylene Bag (1)
P2	SPS3327	Pad, Left Side (1)
P3	SPS3329	Pad, Right Side (1)
P4	SPG4465	Carton Box (1)
P5 Ⓚ	SGK1413	Label, Carton Box (Black) (1)
P6	SPS3467	Pad, Front (1)

■ EXPLODED VIEW



■ EXPLODED VIEW



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